



-1-

SEQUENCE LISTING

<110> BERGERON, Michel G.
BOISSINOT, Maurice
HULETSKY, Ann
MENARD, Christian
OUELLETTE, Marc
PICARD, Francois J.
ROY, Paul H.

<120> HIGHLY CONSERVED GENES AND THEIR USE TO GENERATE
SPECIES-SPECIFIC, GENUS-SPECIFIC AND UNIVERSAL NUCLEIC
ACID PROBES AND AMPLIFICATION PRIMERS TO RAPIDLY DETECT
AND IDENTIFY ALGA, ARCHAEL,...

<130> 12287.35

<140>

<141>

<160> 2297

<170> PatentIn Ver. 2.1

<210> 1

<211> 750

<212> DNA

<213> Acinetobacter baumannii ATCC 19606

<400> 1
caaacctcgtg agcacatcct tctttctcgt caggtaggtg taccttacat catcgtattc 60
ttaaacaaat gcgaccttgt tgatgacgaa gaattacttg aattagtaga aatggaagta 120
cgtgaacttc tttctactta tgacttccca ggtgatgaca ctccagtaat ccgtgggtca 180
gctcttgcag cgcttaacgg tgaagctggt ccttacggtg aagaatcagt tcttgccttt 240
gtagcagcac ttgactctta catcccagag ccagagcgtg caatcgacaa agcattcttg 300
atgccaatcg aagacgtatt ctcaatttct ggtcgtggta cagtagtaac aggccgtggt 360
gaagctggta tcatcaaagt tggatgaagaa gtatagatcg ttggtattaa agatacagtt 420
aaaacaactg taactggcgt agaaatgttc cgtaaacctt ttgacgaagg ccgtgcaggt 480
gagaactgtg gtatcttact tctgtgtact aagcgtgaag aagtacaacg tggatcaagta 540
cttgctaaac caggtacaat caagccgcac actaaattcg acgcagaagt atacgtactt 600
tctaaagaag aaggtggtcg tcacactcca ttcttaaatg gttaccgtcc acagttctac 660
ttccgtacaa ctgacgtaac tgggtgcratc cagttgaaag aaggcgttga aatggtaatg 720
ccaggtgaca acgttgaaat gtcagtagaa 750

<210> 2

<211> 826

<212> DNA

<213> Actinomyces meyeri ATCC 35568

<400> 2
cgggtgcgatc ctcgtgggtcg ccgcgaccga cggcccccattg gcccagaccg gcgagcacgt 60
cctgctcgcc cgtcaggtcg gcgttcccac catcctcatc gccctcaaca agtccgacat 120
ggttgacgac gaggaaatga tggaactggt cgaggaggag tgccgcgacc tgctggagtc 180
ccaggacttc gatcgcgatg ccccgatcgt ccagggtttcc gctctgaagg ccctcgaggg 240
cgacgcggag tgggttgcca agatcgagga gctcatggag gctgtggatt ccttcacgat 360
caccgccgag cgcgatatgg acaagccctt cctcatgccc atcgaggacg tcttcacgat 420
cacaggtcgt ggcacgggtcg tcacggggcg tgttgagcgt ggcaagctgc cgatcaactc 480
cgaggtcgag atcctcggtg tccgtgatcc ccagaagacc acggtcaccg gcatcgagat 540
gttccacaag tcgatggacg aggcattggc cggcgagaac tgtggcctgc tgctgcgcgg 600
taccaagcgc gatgaggttg agcgcggcca ggttgtggcc attcccggct ccatcacgcc 660
tcacaccgag ttcgagggcc aggtttacat cctcaagaag gaagagggcg gccgtcacia 720
cccgttcttc tcgaactacc gtccgcagtt cctactccgt accacggacg tgaccggcgt 780
catcaccctc cccgagggca ccgacatggt catgcctggc gacaccaccg agatctccgt 826
tcagctgatc cagcccatcg ccatggagcc cggctgggct tcgcca

<210> 3
 <211> 835
 <212> DNA
 <213> *Aerococcus viridans* ATCC 11563

<400> 3
 tgggtgcgatc ttagtagtat ctgctgctga tgggtccaatg ccacaaactc gtgagcaca 60
 ccttttagct ggccaaatcg gtgttcctgc attcgtagta ttcttaaaca aagttgacca 120
 agttgacgat gaagaattac tagaattagt tgaaatggaa gttcgtgact tattatctga 180
 gtacaactac ccaggtgacg atctacctgt aatcgctggt tctgctttat tagcattaca 240
 aggcgatgaa gctcaagaag ctaaaatcat ggaattaatg gaagctgtag actcttaca 300
 tccagaacca gaacgtgaca acgacaaacc attcatgatg ccaattgagg atgtattctc 360
 aatcactggt cgtggtactg ttgctacagg tcgtgttgaa cgtggtgaa ttcgtacagg 420
 tgacgaagtt gacatcggtg gtattgctga acaaatcggt aaatcagttg taactggtgt 480
 tgaaatgttc cgtaaaaact tagactacgc tcaagctggt gacaacatcg gtgcattatt 540
 acgtggtgtt caacgtgaag acatccaacg tgggtcaagta ttggctgctc ctggttcaat 600
 cactccacat actaaattta aagcgcaagt ttacgtttta tctaaagaag aaggtggacg 660
 tcatacacca ttcttaacta actaccgtcc acaattctac ttccgtacta ctgacattac 720
 tgggtgttatc actttaccag aagacgtagc tatggttatg cctggtgaca acgttgatat 780
 ggacgttgaa ttgattcacc cagttgcgat cgaagatggt actaaattct ctatc 835

<210> 4
 <211> 827
 <212> DNA
 <213> *Achromobacter xylosoxidans* subsp. *denitrificans* ATCC 15173

<400> 4
 cctggtggtg tcggccgctg acggcccgat gccgcaaacg cgcgaaacaca tcctgctgag 60
 ccgccaggtt ggcggtgcgt acatcatcgt cttcctgaac aaggccgaca tgggtgacga 120
 cgccgagctg cttgagctgg tggaaatgga agttcgcar ctgctgagca agtacgactt 180
 cccgggcgac gacaccccgga tcgtgaaggg ttccggccaag ctggcgctgg aaggcgacaa 240
 gggcgaaactg ggcgaaacagg ccatcatggc gctggccgct gcgctggact cgtacatccc 300
 gacgcctgag cgtgccgttg acggcgcggt cctgatgccg gttgaagacg tgttctcgat 360
 ctcggttcgc ggcaacgtgg tgaccggccg tatcgaacgc ggcacatca aggtcggcga 420
 ggaaatcgaa atcgctcggtc tgggtgccgac ggtgaagacg acctgcacgg gcgtggaaat 480
 gttccgcaag ctgctggacc aagggtcaagc cggcgacaac gtgggcatcc trctgcgcgt 540
 caccaagcgt gaagacgtcc agcgcggccg ggttctggcc aagccggggt cgatcacccc 600
 gcacacggac ttcacgtccg aggtgtacat cctgtccaag gaagaaggcg gccgtcacac 660
 tccgtttctt caaggtctatc gtccccagtt ctacttccgc acgacggacg tgacgggcac 720
 gatcgagctg ccggccgaca aggaaatggt cctgcggggc gacaacgtgg ccatgacggg 780
 caagctgctg gctccgatcg ccatggaaga aggcctgcgt tcgccac 827

<210> 5
 <211> 823
 <212> DNA
 <213> *Anaerorhabdus furcosus* ATCC 25662

<400> 5
 tggatcaatc ctagtagttg ctgcaactga tggaccaatg cctcaaactc gtgaacatat 60
 cttacttgct cgtcaagtag gtgttccaag aatgggttgta ttcttgaaca aatgcgacat 120
 ggttgaagat gaagaattaa tcgacctgtg tgaaatggaa gttcgtgaac ttctaagtgc 180
 ttacggtttc gaaggtgatg atacaccagt tatccgtggt tctgcattaa aatctcttga 240
 aggaaatgct gattgggaag caaaagtgtc tgaattaatg gatgcagttg actcttggat 300
 tccaactcca actcatgaaa cagacaaacc attcttaatg gctgttgaag atgtattcac 360
 aattacaggc cgtggtacag ttgctactgg acgtgttgaa cgtggacact taaaccttaa 420
 cgaagaagtt gaaatcgttg gtattcatga tactaagaaa tcagttgtta ctggtatcga 480
 aatgttccgt aaattattag actatgctga agcaggagac aacattgggtg cattattacg 540
 tgggtgtttct cgtgatgaaa tcgaacgtgg acaatgtcta gctaaacctg gatcagttac 600
 tccacatata gctttcaaag ctcaagtata cgtattaact aaagaagaag gtggacgtca 660
 tacaccattc gtaactaact accgtctcca attctatttc cgtacaactg acgtaacagg 720
 agttgttaaa cttcctgaag gtactgaaat gggttatgct ggagacaaca tcgaaatgat 780
 cgttgaatta atcgctccaa tcgctgttga acaaggaact aag 823

<210> 6
<211> 825
<212> DNA
<213> *Bacillus anthracis* strain 4229

<400> 6
cggcgggtatc ttagtagtat ctgctgctga tggcccaatg cctcaaactc gtgagcacat 60
ccttcttttct cgtcaagtag gtgtacctta catcggttga ttcttaaaca aatgcgacat 120
ggtagacgac gaagaattat tagaattagt agaaatggaa gttcgcgacc tattatctga 180
atacggattc ccaggcgacg acattcctgt aatcaaagggt tctgctctta aagctcttca 240
aggagaagct gattgggaag caaaaatcat tgaattaatg gctgaagttg atgcttacat 300
cccaactcca gaacgtgaaa ctgacaaaacc attcttaatg cctgtagagg acgtattctc 360
tatcacaggt cgtggtacag ttgctactgg tctgtttgag cgcgggtatcg ttaaagttgg 420
tgacgtagta gaaatcatcg gtcttgctga agaaaatgct tctacaactg taactggtgt 480
agagatgttc cgtaaacttc ttgaccaagc tcaagctgga gacaacatcg gtgctttact 540
tcgtgggggtt gctcgtgaag acatccaacg tggacaagta cttgcaaaaa gcggttctgt 600
aaaagctcac gctaaattca aagctgaagt tttcgtatta tctaaagaag aaggtggacg 660
tcacactcca ttcttcgcta actaccgtcc tcagttctac ttccgtacaa ctgacgtaac 720
tggtatcatc caattaccag aagggtactga aatggtaatg cctggtgaca acatcgaaat 780
gactatcgaa cttatcgctc caatcgctat cgaagagggga actaa 825

<210> 7
<211> 829
<212> DNA
<213> *Bacillus cereus* ATCC 14579

<400> 7
cggcgggtatc ttagtagtat ctgctgctga tggcccaatg cctcaaacac gtgagcacat 60
ccttcttttct cgtcaagtag gtgttcctta catcggttga ttcttaaaca aatgcgacat 120
ggtagatgac gaagaattat tagaattagt agaaatggaa gttcgcgacc tattatctga 180
atacggattc ccaggcgacg acattcctgt aatcaaagggt tctgctctta aagctcttca 240
aggagaagct gattgggaag caaaaatcat tgaattaatg gctgaagttg atgcttacat 300
cccaactcca gaacgtgaaa ctgacaaaacc attcttaatg cctgtagagg acgtattctc 360
tatcacaggt cgtggtacag ttgctactgg tctgtttgag cgcgggtatcg ttaaagttgg 420
tgacgtagta gaaatcatcg gtcttgctga agaaaatgct tctacaactg taactggtgt 480
agagatgttc cgtaaacttc ttgaccaagc tcaagctgga gacaacatcg gtgctttact 540
tcgtgggggtt gctcgtgaag acatccaacg tggacaagta cttgcaaaaa gcggttctgt 600
aaaagctcac gctaaattca aagctgaagt tttcgtatta tctaaagaag aaggtggacg 660
tcacactcca ttcttcgcta actaccgtcc tcagttctac ttccgtacaa ctgacgtaac 720
tggtatcatc caattaccag aagggtactga aatggtaatg cctggtgaca acattgaaat 780
gactatcgaa cttatcgctc caatcgctat cgaagagggga actaaattc 829

<210> 8
<211> 818
<212> DNA
<213> *Bacteroides distasonis* ATCC 8503

<400> 8
cgggtgctatc atcgtagttg ctgctactga tggctcctatg cctcaaactc gcgagcacat 60
cctttttggct cgtcaggtaa acgttccgag attggttgta ttcatgaaca agtgtgacat 120
ggttgacgac gaggaaatgt tggaaattgg tgagatggag atgagagagt tgctttcatt 180
ctatcaattc gacggtgaca acactccgat catccgtggt tctgctcttg gtgcattgaa 240
cgggtgatgct caatgggaag ataaagtaat ggagttgatg gaagcttctg atacttggat 300
tcctctgcct ccgcgcgaaa tgcacaagcc gttcttgatg ccggttgagg acgtattctc 360
aatcacgggt cgtggtactg ttgctacagg tcgtatcgag acaggtattg ttaaggttgg 420
tgaggaagtt cagatcatcg gtcttggcgc tgctggtaag aaatctggtt ttacaggtgt 480
tgagatgttc cgtaagttat tggatcaagg tgaggctggt gataacgttg gtttgttgct 540
tcgcgggtatc gataagaatg agatcaagcg tggtatggta atctgccacc cgggtcaggt 600
taaagagcat tctaagttca aggctgaggt ttatatcttg aagaaagagg aaggtggctc 660
tcacactccg ttccacaaca aatatcgtcc tcagttctat atccgtacat tggatgtaac 720
tggtgagatc actttgcccgg aaggaaactga aatggtaatg ccgggtgata acgtaacgat 780
cgagggttgag ttgatctatc cggtagcatg tagcgtag 818

<210> 9
 <211> 639
 <212> DNA
 <213> *Enterococcus casseliflavus* strain R763

<400> 9
 ggtcctatgc ctcaaacacg tgaacacatc ttgttatcac gtaacggttg tgtaccatac 60
 atcggttgttt tcttaaacaa aatggatatg gttgatgacg aagaattact agaattagtt 120
 gaaatggaag ttctgtgactt attgtcagaa tatgacttcc caggcgacga tgttcctgta 180
 atcgctggtt ctgctttgaa agctcttgaa ggcgatgctt catacgaaga aaaaatcatg 240
 gaattaatgg ctgcagttga cgaatacgtt ccaactccag aacgtgacac tgacaaacca 300
 ttcatgatgc cagtcgaaga cgtattctca atcactggac gtgggtactgt tgctacaggc 360
 cgtggtgaac gtggacaagt tcgcgtttgt gacgaagttg aaatcggttg tattgctgaa 420
 gaaactgcta aaacaactgt aactggtgtt gaaatgttcc gtaaattgtt agactatgct 480
 gaagcagggg ataacatttg tgcattgcta cgtggtgttg ctcgtgaaga catccaacgt 540
 ggacaagtat tggctaaagc tgggtacaatc acacctcata caaaatttaa agctgaagtt 600
 tacgttttaa caaaagaaga aggtggacgt cacacacca 639

<210> 10
 <211> 692
 <212> DNA
 <213> *Staphylococcus saprophyticus* strain CSG 197

<400> 10
 gaacacattc ttttatcacg taacgttggg gttccagcat tagttgtatt cttaaacaaa 60
 gttgacatgg ttgacgatga agaattatta gaattagtag aaatggaagt tcgtgactta 120
 ttaagcgaat atgacttccc aggtgacgat gtacctgtaa tctctgggtc tgcattaaaa 180
 gctttagaag gcgacgctga ctatgagcaa aaaatcttag acttaatgca agctgttgat 240
 gacttcattc caacaccaga acgtgattct gacaaacat tcatgatgcc agttgaggac 300
 gtattctcaa tcaactggtcg tggactgttt gctacaggcc gtgttgaacg tggcacaatc 360
 aaagtccgtg aagaaatcga aatcatcggt atgcaagaag aatcaagcaa aacaactgtt 420
 actggtgtag aaatgttccg taaattatta gactacgctg aagctggtga caacattggg 480
 gcattattac gtggtgtttc acgtgatgac gtacaacgtg gtcaagtttt agctgtctct 540
 ggtactatta caccacatac aaaattcaaa gcggatgttt acgtttttatc taaagatgaa 600
 ggtggtcgtc ataccacatt cttactaacc tacgccccac aattctattt ccgtactact 660
 gacgtaactg gtgttggttaa cttaccagaa gg 692

<210> 11
 <211> 821
 <212> DNA
 <213> *Bacteroides ovatus* ATCC 8483

<400> 11
 cgggtgctatc atcgttttgtg ctgcaactga tgggtccgatg cctcaaactc gcgaacacat 60
 tctgttagct cgtcaggtaa acgtacctcg tctgggttga ttcttgaaca aatgcgatat 120
 ggtagacgac gaagaaatgt tggaaactcg tgaaatggaa atgagagAAC tcctttcatt 180
 ctatgatttc gatggtgaca atactcctat catccgtggg tctgctcttg gcgcattgaa 240
 cgggtgttgaa aaatgggaag acaaagttaa ggaactgatg gatgcagttg ataactggat 300
 tccactgcct ccgcgcgatg ttgataaacc attcttgatg ccggttgaag acgtgttctc 360
 tatcacagggt cgtggtactg tagcaacagg tcgtatcgaa acagggtgtca tccacgttgg 420
 tgatgaagtc gaaattcttg gtttaggtga agataagaaa tcagttgtaa ctggtgttga 480
 aatgttccgt aaactgttgg atcaagggtga agctgggtgac aacgtaggtc ttttgcttcg 540
 tggatttgac aagaacgaaa tcaaactgtg tatggttctt tgtaaaccag gtcagattaa 600
 accgcactct aaattcaaag ctgaggttta tatcttgaag aaagaagaag gtggtcgtca 660
 cactccgttc cacaacaaat accgtcctca gttctacttg cgtactatgg actgtacagg 720
 tgaaatcact ttgccggaag gaacagaaat ggtaatgccg ggtgataacg taactattac 780
 agttgagttg atttaccag tagcattgaa cccgggcttc g 821

<210> 12
 <211> 838
 <212> DNA
 <213> *Bartonella henselae* ATCC 49882

<400> 12
 tggtgcgatt ttggttgttt cagctgctga tgggtccgatg cctcaaacac gtgagcatat 60
 tcttcttgcc cgtcagggtt gtgttccagc gattgttgtt tttcttaata aggttgatca 120
 ggttgatgat gctgagcttt tggagcttgt tgagcttgaa gttcgggagt tattgtcgaa 180
 atatgatttt ccaggagacg atattccgat cgttaaagggt tctgcttttg cagcgttga 240
 agataaagat aaaagcattg gtgaagatgc ggttcgtctt ttgatgagtg aagttgataa 300
 ttatataccg acgcctgaac gtcctgttga tcagccgttt ttgatgccaa ttgaagatgt 360
 tttttcgatt tcgggtcgtg gaactgttgt gacgggtcgt gttgagcgtg gtgttattaa 420
 ggttggtgaa gaagttgaga ttatcggcat tcgtccaact tctaagacaa cagttacagg 480
 ggttgaaatg ttccgcaagc ttttagatca ggggcaagcg ggtgataata ttggagcgt 540
 gcttcgtggt attgatcgtg aagggattga gcgtggacaa gttttggcga agcctgtctc 600
 ggttacacct catacgagat ttaaagcaga ggcttacatt ttgacgaaaag atgaagggtg 660
 tcgtcatact ccatttttca cgaattatcg tcctcagttt tatttccgta ctacggatgt 720
 aacgggaatt gttacgcttc cagaagggtac agagatgggt atgcctggtg ataatgttgc 780
 tatggatgtc tctctgattg ttccaattgc catggaagaa aaacttcgtt ttgctatc 838

<210> 13
 <211> 839
 <212> DNA
 <213> Bifidobacterium adolescentis ATCC 15703

<400> 13
 tggcgccatc cttgttgttg cgcgccaccga cggccccgatg gctcagaccc gcgagcacgt 60
 gctgctcgtc cgtcagggtg gcgtcccgaa gatcctcgtc gctctgaaca agtgcgatat 120
 ggtcgacgac gacgagctca tcgagctcgt tgaggaagag gtccgtgacc tcctcgacga 180
 aaatggcttc gatcgcgatt gcccggtcat ccacgtgtcc gcttacggcg cactgcacga 240
 tgacgctccg gaccacgaga agtgggttga gcagatcaag aagctcatgg acgccgtcga 300
 tgactacatc ccgaccccg tccacgatct ggacaagccg ttccctgatgc cgatcgaaga 360
 tgtcttcacc atctccggcc gtggcaccgt ggtgaccggc cgtgtcagagc gtggtaagct 420
 cccgggtcaac tccaacgtcg agatcgtcgg catccgtccg acccagacca ccaccgtcac 480
 ctccatcgag acctccaca agcagatgga cgagtgcgag gctggcgaca acaccggtct 540
 gctgctccgc ggcacacacc gtgaccaggt cgagcgtggc cagggttctgg ctgctccggg 600
 ctccgtgacc ccgcacacca agttcgaggg cgaagtctac gtgctgacca aggacgaagg 660
 cggccggtcac tcgccgttct tctccaacta ccgtccgcag ttctacttcc gtaccaccga 720
 cgtcaccggc gtcacacccc tgccggaagg cgttgagatg gtgcagccgg gcgatcacgc 780
 taccttcggc gttgagctga tccagccgat cgctatggaa gagggcctga ccttcgcag 839

<210> 14
 <211> 839
 <212> DNA
 <213> Bifidobacterium dentium ATCC 27534

<400> 14
 tggcgctatc ctcgttgttg cgcgccaccga cggccccgatg gctcagaccc gcgagcacgt 60
 gctgctcgtc cgtcagggtg gcgtgccgcg tatectcgtc gccctgaaca agtgcgatat 120
 ggtcgacgac gaagagctca tcgagctcgt tgaggaagag gtccgtgacc tcctcgacga 180
 aaacggcttc gatcgcgatt gcccggtcat ccacacctcc gcctacggcg cgctgcacga 240
 tgacgctccg gaccacgaca agtgggttga gtcctcaag gaactcatga aggcgtcga 300
 cgagtacatc ccgaccccg cccacgatct ggacaagccg ttccctgatgc cgatcgaaga 360
 tgtgttcacc atctccggcc gtggcaccgt ggtaaccggc cgtgtcagagc gtggtaagct 420
 cccgggtcaac tccaacgttg agatcgtcgg catccgtccg acccagacca ccaccgtcac 480
 ctccatcgag acctccaca agcagatgga cgagtgcgag gctggcgaca acaccggtct 540
 gctgctccgc ggcacacacc gtgaccaggt cgagcgtggc cagggttctgg ctgctccggg 600
 ctccgtgacc ccgcacacca agttcgaggg cgaagtctac gtgctgacca aggacgaagg 660
 cggccggtcac tcgccgttct tctccaacta ccgtccgcag ttctacttcc gtaccaccga 720
 cgtcaccggc gtcacacccc tgccggaagg cgttgagatg gtgcagccgg gcgatcacgc 780
 taccttcggc gttgagctga tccagccgat cgctatggaa gagggcctga ccttcgcag 839

<210> 15
 <211> 838
 <212> DNA
 <213> Brucella abortus strain S2308

```

<400> 15
tggcgcgatc ctggtggttt cggctgctga cggcccgatg ccgcagaccg gcgagcacat 60
cctgcttgcc cgtcagggtg gcgttcgggc gatcgtcgtg ttcctcaaca agtgcgacca 120
ggttgacgat gcagaactgc tcgaactggg tgaactggaa gtgcgcgaac ttctgtcgaa 180
gtacgaattc cccggcgacg aaatcccgat catcaagggc tcgggtcttg ctgctctgga 240
agattcttcc aaggaaactgg gcgaagatgc catccgcaac ctgatggacg cggttgacag 300
ctacattccg accccggaac gcccgatcga ccagccgttc ctgatgccga tcgaagacgt 360
gttctcgatc tccggccgtg gtacggttgt gacgggtcgc gttgagcgcg gtatcggttaa 420
ggtcggtgaa gaagttgaaa tcgtcggcat caaggcgacg acgaagacca cggttaccgg 480
cgttgaaatg ttccgcaagc tgctcgacca gggccaggct ggcgacaaca ttggcgcgct 540
gatccgcggc gttggccgtg aagacgttga acgcgccag gttctctgca agccgggttc 600
tgtgaagccg cacaccaagt ttaaggcaga agcctatatt ctgaccaagg acgaaggtgg 660
ccgtcatacg ccgttcttca ccaactaccg tccgcagttc tacttccgta cgacggacgt 720
gacgggtgtt gtgacgcttc cggctggcac ggaaatggtc atgcctggcg ataacgtcgc 780
catggacgtt accctgatcg tgccgatcgc catggaagag aagcttcgct tcgctatc 838

```

```

<210> 16
<211> 771
<212> DNA
<213> Burkholderia cepacia strain LSPQ 2217

```

```

<400> 16
ggcagcagac ggccccgatgc cgcaaacgcg tgagcacatc ctgctggcgc gtcagggttg 60
cgttccgtac atcatcgtgt tcctgaacaa gtgcgacatg gtggacgacg ccgaactgct 120
cgagctgggt gagatggaag ttccgcgaact cctgtcgaag tacgacttcc cgggcgacga 180
cacgccgatc gtgaaggggt cggcgaaagt ggcgctggaa ggcgacacgg gcgagctggg 240
cgaagtggcg atcatgagcc tggccgacgc gctggacacg tacatcccg cggcgagcgg 300
tgcagttgac ggcgcggttc tgatgccggg ggaagacgtg ttctcgatct cgggcccggg 360
tacgggtggtg acgggtcgtg tcgagcgcgg catcgtgaag gtcggcgaag aaatcgaaat 420
cgtcgggtatc aagccgacgg tgaagacgac ctgcacgggc gttgaaatgt tccgcaagct 480
gctggaccaaa ggtcaagcag gcgacaacgt tggtatcctg ctgcgcggca cgaagcgtga 540
agacgtggag cgtggccagg ttctggcgaa gccgggttcg atcacgccg acacgcactt 600
cacggctgaa gtgtacgtgc tgagcaagga cgaaggcggc cgtcacacgc cgttcttcaa 660
caactaccgt ccgcagttct acttccgtac gacggacgtg acgggctcga tcgagctgcc 720
gaaggacaag gaaatggtga tgccgggcga caacgtgtcg atcacggtga a 771

```

```

<210> 17
<211> 829
<212> DNA
<213> Cedecea davisae ATCC 33431

```

```

<400> 17
ggcgctatcc tggttgttgc tgcgactgat ggcccaatgc cacagaccgg tgagcacatc 60
ctgctgggtc gtcagggttg cgttccgtac atcatcgtgt tcctgaacaa atgcgacatg 120
gttgatgacg aagagctgct ggaactggta gaaatggaag ttctgaact tctgtcccag 180
tacgacttcc cgggcgacga tactccaatc gttcgtgggt ctgctctgaa agcgtggaa 240
ggcgaagcag agtgggaagc taaaatcggt gagctgggtg gctacctgga ttcttacatc 300
cctgagccag agcgtgctat cgataagccg ttctgtctgc caatcgaaga cgtattctcc 360
atctccggcc gtggtaccgt tgttaccggg cgtgtagagc gcggatatcat caaagttggt 420
gaagaagttg aaatcgttgg tatcaaagat actgcgaaat ctacctgtac cggcgttgaa 480
atgttccgca aactgctgga cgaaggccgt cgtggtgaga acgttggtgt tctgtgctg 540
ggatatcaaac gtgaagaaat cgaacgtggg caggactagg ctaagccagg ctctatcaag 600
ccacacacca agttcgaatc tgaagtgtac atcctgtcca aagacgaagg cggccgtcat 660
actccgttct tcaaaggcta ccgtccacag ttctacttcc gtacaactga cgtgaccggc 720
accatcgaac tgccagaagg cgttgagatg gtaatgcctg gcgacaacat caaatgggtt 780
gttaccctga tccacccaat cgcgatggat gacgggtctgc gtttcgcaa 829

```

```

<210> 18
<211> 824
<212> DNA
<213> Cedecea neteri ATCC 33855

```

```

<400> 18

```

cgctatcctg	gttggttgcg	cgactgacgg	ccctatgcct	cagacccgtg	agcacatcct	60
gctgggtcgt	cagggttggcg	ttccttacat	catcgtgttc	ctgaacaaat	gtgacatggt	120
tgatgacgaa	gagctgctgg	agctgggtga	aatggaagtt	cgtgaacttc	tgtctcagta	180
cgacttcccc	ggcgaatgaca	ctccaatcat	ccgtggttct	gctctgaaag	cgctggaagg	240
cgaagcagag	tgggaagcta	aaatygttga	gctggctggc	ttcctggatt	cctacatccc	300
agaaccagta	cgtgcaatcg	ayctgccgtt	cctgctgcca	atcgaagacg	tattctccat	360
ctccggccgt	ggtaccgttg	ttaccggtcg	tgtagagcgc	ggtatcgta	aagtgggcga	420
agaagtagaa	atcgttggtg	tcaaagatac	tgcgaaatct	acctgtaccg	gcgttgaaat	480
gttccgcaaa	ctgctggacg	aaggccgtgc	tggtgagaac	ggttggtgtc	tgctgcgtgg	540
tatcaaactg	gaagaaatcg	aacgtgggtc	ggttctggct	aagccaggct	ctatcaagcc	600
gcacaccaag	ttcgaatctg	aagtgtacat	cctgtccaaa	gacgaaggcg	gccgtcatac	660
tccgttcttc	aaaggctacc	gtccacagtt	ctacttccgt	acaactgacg	tgaccggtac	720
catcgaactg	ccagaaggcg	tagagatggt	aatgccaggc	gacaacatca	aaatggttgt	780
taccctgatc	cacccaatcg	cgatggacga	cggtctgcgt	ttcg		824

<210> 19
 <211> 827
 <212> DNA
 <213> *Cedecea lapagei* ATCC 33432

cgctattctg	gttggttgcg	caactgacgg	ccctatgcct	cagacccgtg	agcacatcct	60
gctgggtcgc	cagggttggcg	ttccttacat	catcgtgttc	ctgaacaaat	gtgacatggt	120
tgatgacgaa	gagctgctgg	agctgggtga	aatggaagtt	cgtgaacttc	tgtctcagta	180
cgacttccca	ggcgaatgata	ccccaatcat	ccgtggttct	gctctgaaag	cgctggaagg	240
cgaagcagag	tgggaagcta	aaatcggtga	gctggctggc	ttcctggatt	cctacatccc	300
agaaccagta	cgtgcaatcg	acctgccgtt	cctgctgcca	atcgaagacg	tattctccat	360
ctccggccgt	ggtaccgttg	tkaccggtcg	tgtagagcgc	ggtatcgta	aagtgggcga	420
agaagtagaa	atcgttggtg	tcaaagatac	tgcgaaatct	acctgtactg	gcgttgaaat	480
gttccgcaaa	ctgctggacg	aaggccgtgc	tggtgagaac	ggttggtgtc	tgctgcgtgg	540
tatcaaactg	gaagaaatcg	aacgtgggtc	ggttctggct	aagccaggct	ctatcaagcc	600
gcacaccaag	ttcgaatctg	aagtgtacat	cctgtccaaa	gacgaaggcg	gccgtcatac	660
tccgttcttc	aarggctacc	gtccacagtt	ctacttccgt	accactgacg	tgaccggtac	720
catcgaactg	ccagaaggcg	tagagatggt	aatgccaggc	gacaacatca	aaatggttgt	780
taccctgatc	cacccaatcg	cgatggacga	cggtctgcgt	ttcgcaa		827

<210> 20
 <211> 831
 <212> DNA
 <213> *Chlamydia pneumoniae* strain CWL 029

gcgagctat	cctagtcggt	tcagctacag	acggagctat	gccacaaact	aaagaacata	60
tcttgctagc	tcgccaggtt	ggagttcctt	atatacgttg	tttcttgaat	aaagtagata	120
tgatctctca	agaagatgct	gaacttattg	accttggtga	gatggaaact	agttagcttc	180
ttgaagaaaa	aggctacaaa	ggatgcccta	ttatccgtgg	ttctgctttg	aaagctcttg	240
aagggtgatg	aaattatata	gaaaaagttc	gagaacttat	gcaagctgtg	gatgacaaca	300
tcctacaccc	agaaagagaa	attgataagc	ctttcttaat	gcctatcgaa	gacgtattct	360
caatctctgg	tcgtggtact	gtgggttacag	gaagaatcga	gcgtggaatc	gttaaagttt	420
ctgataaagt	tcagctcgtg	ggattaggag	agactaaaga	aaacaatcgt	actggagtcg	480
aaatgttcag	gaaagaactt	cctgaagggt	gtgcaggaga	aaacgttggt	ttactcctca	540
gagggtattg	aaagaacgat	gttgaaagag	gtatggtggt	ttgtcagcct	aacagcgtga	600
agcctcatac	gaaatttaag	tcagctgttt	acgttcttca	gaaagaagaa	ggcggacgtc	660
ataagccttt	cttcagcgga	tacagacctc	agttcttctt	ccgtactaca	gacgtgacag	720
gagtcgtaac	tcttcctgaa	ggaactgaaa	tggtaatgcc	tgagagataac	gttgagcttg	780
atggttagct	cattggaaca	gttgctcttg	aagaaggaat	gagatttgca	a	831

<210> 21
 <211> 826
 <212> DNA
 <213> *Chlamydia psittaci*

<400> 21

tggagcgcatt	ctcgttgttt	ccgctactga	cgggtgcgatg	cctcagacca	aagaacatat	60
tcttttggcg	agacagggtg	gtgttcctta	catcggttgtt	ttccttaaca	aaatcgatat	120
gattttctcaa	gaagatgctg	agctcgtaga	cttagttgaa	atggaattgt	ccgaacttct	180
agaagaaaaa	ggttataaa	gttgcccaat	tatccgtggt	tctgctttga	aagccttaga	240
aggtgatgca	agctacgttg	aaaaaattcg	cgagttaatg	caagcagtg	atgataacat	300
ccctactcca	gagcgtgaag	ttgataagcc	tttcttaatg	cctatcgaag	acgtattctc	360
tatttctggt	cgtggtactg	tggtcacagg	acgtatcgag	cgtggaatcg	ttaaagtggg	420
tgataaagta	cagattgttg	gtttaagaga	tactagagag	acaattgtta	ccggtgtgga	480
aatgttcaga	aaagaacttc	cagaagggtc	agcaggggaa	aacgttgggt	tgctcctcag	540
aggtatcggg	aagaatgacg	ttgaacgtgg	tatggttatc	tgccaaccta	atagcgtgaa	600
atctcacaca	caattttaa	gtgctgtcta	cattctacaa	aaagaagagg	gtggacgtca	660
taaacctttc	tttaccggat	acagacctca	gttcttcttc	cgtacaacag	atgttacagg	720
tggtgtaact	ctcccagaag	gtacagagat	ggttatgcc	ggcgataacg	ttgaattcga	780
agttcaatta	attagcccag	tagctctaga	agaagggtatg	agattt		826

<210> 22
 <211> 822
 <212> DNA
 <213> Chlamydia trachomatis strain LGV 12

ggggctattc	tagtagtttc	tgcaacagac	ggagctatgc	ctcaaactaa	agagcatatt	60
cttttggcaa	gacaagttgg	ggttcccttac	atcggttgtt	ttctcaataa	aattgacatg	120
atttccgaag	aagacgctga	attgggtcgag	ttgggtgaga	tgaggttggc	tgagcttctt	180
gaagagaaa	gatacaaaag	gtgtccaatc	atcagagggt	ctgctctgaa	agctttggaa	240
ggggatgctg	catacataga	gaaagtccga	gagctaattg	aagccgtcga	tgataaatat	300
cctactccag	aaagagaaat	tgacaagcct	ttcttaatgc	ccattgagga	cgtgttctct	360
atctccggac	gaggaactgt	agtaactgga	cgtattgagc	gtggaattgt	taaagtttcc	420
gataaagttc	agttgggtcgg	tcttagagat	actaaagaaa	cgattgttac	tggggttgaa	480
atgttcagaa	aagaactccc	agaaggctcg	gcaggagaga	atgttggatt	gtcctctcaga	540
ggtattggta	agaacgatgt	ggaaagagga	atgggttgtt	gcttgccaaa	cagtgttaaa	600
cctcatacac	ggtttaagt	tgctgtttac	gttctgcaaa	aagaagaagg	tgagcagcat	660
aagcctttct	tcacaggata	tagacctcaa	ttcttcttcc	gtacaacaga	cgttacaggt	720
gtggtaactc	tgctgaggg	agttgagatg	gtcatgcctg	gggataacgt	tgagtttgaa	780
gtgcagttga	ttagccctgt	ggcttttagaa	gaagggtatga	ga		822

<210> 23
 <211> 835
 <212> DNA
 <213> Chryseobacterium meningosepticum strain CDC B7681

cggagctatc	ttagtatgtg	ctgctacaga	tggtccaatg	cctcaaacta	gagaacacat	60
cctacttttg	cgtcaggtaa	acgtacctag	aattgtttgt	ttcatgaaca	aagttgacat	120
ggtagatgat	ccagaattgt	tagagcttgt	tgagcttgaa	cttagagatc	tattatctac	180
ttacgaatat	gatggtgata	actctccagt	aattcaaggt	tctgctcttg	gtgctcttaa	240
cggtgatgct	aagtgggtag	ctactgtaga	agctctaata	gatgctgttg	atacttggat	300
cgagcaacca	gtaagagatt	ctgataagcc	attccttatg	ccaatcgaag	acgtattctc	360
tattacaggt	agaggtactg	tagcaactgg	tagaatcgag	gctgggtgta	tcaacacagg	420
tgatcctgtt	gacatcgtag	gtatgggtga	cgagaagtta	acttctacta	ttacaggtgt	480
tgagatgttt	gaaaaaatcc	tagacagagg	tgaagctggg	gataacgtag	gtctattgtt	540
gagaggtatt	gaaaagactg	acatcaagag	aggtatggtt	atcgctaaga	aagattcagt	600
taagccacac	aagaaattca	aagctgaggt	ttatatcctt	tctaaagaag	aaggtggacg	660
tcacactcca	ttccacaaca	aataccgtcc	tcagttctat	gtaagaacta	ctgacgttac	720
aggtgaaatc	ttcttaccag	aaggtgtaga	aatggtaatg	cctgggtgata	acttaactat	780
cactgtagaa	ttgttacaac	caatcgctct	taacgagggg	cttagattcg	cgatc	835

<210> 24
 <211> 816
 <212> DNA
 <213> Citrobacter amalonaticus ATCC 25405

<400> 24

cgggcgcatc	ctggttggtg	ctgcgactga	cgccccgatg	ccgcagactc	gtgagcacat	60
cctgctgggt	cgtcaggtag	gcgttccgta	catcatcggt	ttcctgaaca	aatgcgacat	120
ggttgatgac	gaagagctgc	tggaactggg	agaaatggaa	gttcgtgaac	ttctgtctca	180
gtacgatttc	ccgggcgacg	acaccccgat	cgttcgtggg	tctgctctga	aagcgctgga	240
aggcgacgca	gagtgggaag	cgaaaatcat	cgaactggcc	ggcttccttg	attcttacat	300
cccggaaacca	gagcgtgcga	ttgacaagcc	gttcctgctg	ccgatcgaag	acgtattctc	360
catctccggg	cggtgtaccg	ttgttaccgg	tcgtgtagaa	cgcggtatca	tcaaagtggg	420
cgaagaagtt	gaaatcggtg	gtatcaaaga	gactgccaag	tctacctgta	ctggcggttg	480
aatgttccgc	aaactgctgg	acgaaggccg	tgcggtgag	aacgttgggt	ttctgctgcg	540
tggtatcaaa	cgtgaagaaa	tcgaacgtgg	tcaggtactg	gctaagccgg	gcwccatcaa	600
gccgcacacc	atgttcgaat	cygaagtgtc	catcctgtcc	aaagacgaag	gcggccgtca	660
tactccgttc	ttcaaaggct	accgtccgca	gttctacttc	cgtacaactg	acgtgactgg	720
caccatcgaa	ctgccggaag	gcgttgagat	ggtaatgccg	ggcgacaaca	tcaaaatggt	780
tgttaccctg	atccacccga	tcgcgatgga	cgacgg			816

<210> 25
 <211> 825
 <212> DNA
 <213> *Citrobacter braakii* ATCC 43162

<400> 25						
cgcgatcctg	gttgttgctg	caactgacgg	cccgatgccg	cagactcgtg	agcacatcct	60
gctgggtcgy	caggtaggcg	ttccgtacat	catcgtgttc	ctgaacaaat	gcgacatggt	120
tgatgacgaa	gagctgctgg	aactggtaga	aatggaagtt	cgtgaacttc	tgtctcagta	180
cgatttcccg	ggcgacgaca	cgccgatcgt	tcgtggttct	gctctgaaag	cgctggaagg	240
cgawgcagag	tggaagcgca	aaatcatcga	actggctggc	ttcctggatt	cttacatccc	300
ggaaccagag	cgtgcgattg	acaagccgtt	cctgctgcct	atcgaagacg	tattctccat	360
ctctgggtcgt	ggtaccgttg	ttaccgggtc	tgtagagcgc	ggtatcatca	aagtgtggtg	420
agaagttgaa	atcgttggtg	tcaargacac	tgctaagtct	acctgtactg	gcgttgaaat	480
gttccgcgaaa	ctgctggacg	aaggccgtgc	tggtgagaa	gttggtgttc	tgctgcgtgg	540
tatcaagcgt	gaagaaatcg	aacgtgggtc	ggtactggct	aagccgggct	ctatcaagcc	600
gcacaccaag	ttcgaatctg	aagtgtacat	tctgtccaaa	gacgaaggcg	gccgtcatat	660
tccgttcttc	aarggctacc	gtccgcagtt	ctacttccgt	actactgacg	tgactgggtac	720
catcgaaactg	ccggaaggcg	ttgagatggg	aatgccgggc	gacaacatca	aaatggttgt	780
taccctgatc	cacccaatcg	cgatggacga	cgtctcgcgt	ttcgc		825

<210> 26
 <211> 830
 <212> DNA
 <213> *Citrobacter koseri* ATCC 27156

<400> 26						
cgggcgcatc	ctggttggtg	ctgcgactga	cgccccgatg	ccgcagaccc	gtgagcacat	60
cctgctgggt	cgtcaggtag	gcgttccgta	catcatcggt	ttcctgaaca	aatgcgacat	120
ggttgatgac	gaagagctgc	tggaactggg	tgagatggaa	gtgcgtgaac	tgctgtctca	180
gtacgatttc	ccgggcgacg	acacgccgat	cgttcgtggg	tctgctctga	aagcgctgga	240
aggcgamgct	gagtgggaag	cgaaaatcat	cgaactggct	ggctacctgg	attcttacat	300
cccggaaacca	gagcgtgcga	ttgacaagcc	gttcctgctg	ccgatcgaag	acgtattctc	360
catctccggg	cggtgtaccg	ttgttaccgg	tcgtgtagag	cgcggtatca	tcaaagtggg	420
cgaagaagtt	gaaatygttg	gtatcaaaga	gactgcgaag	tctacctgta	ctggcggttg	480
aatgttccgc	aaactgctgg	acgaaggccg	tgctggtgag	aacgtagggt	ttctgctgcg	540
tggtatcaaa	cgtgaagaaa	tcgaacgtgg	tcaggtactg	gctaagccgg	gytccatcaa	600
gccgcacacc	aagttcgaat	ctgaagtgtg	catyctgtcy	aaagatgaag	gcggccgtca	660
tactccgttc	ttcaaaggct	accgtccgca	gttctacttc	cgtacaactg	acgtgactgg	720
caccatcgaa	ctgccggaag	gcgtagagat	ggtaatgccg	ggcgacaaca	tcaaaatggt	780
tgttaccctg	atccacccga	tcgcgatgga	cgacggtctg	cgtttcgcaa		830

<210> 27
 <211> 827
 <212> DNA
 <213> *Citrobacter farmeri* ATCC 51112

<400> 27

```

cgcgatcctg gttgttgctg cgactgacgg cccgatgccg cagactcgtg agcacatcct 60
gctgggtcgt caggtaggcg ttccgtacat catcgtgttc ctgaacaaat gcgacatggg 120
tgatgacgaa gagctgctgg aactggtaga gatggaagtt cgtgaactgc tgtctcagta 180
cgatttcccg ggcgacgaca cgccgatcgt tcgtggttct gctctgaaag cgctggaagg 240
cgacgcagag tgggaagcga aaatcatcga actggcaggc ttcttggtt cttacatccc 300
ggaaccagag cgtgcgattg acaagccgtt cctgctgccg atcgaagacg tattctccat 360
ctctggctgt ggtaccgttg ttaccggctg tgtagagcgc ggtatcatca aagtgggtga 420
agaagttgaa atcgttggta tcaaagagac tgccaagtct acctgtactg gcgttgaaat 480
gttccgcaaa ctgctggacg aaggccgtgc tggtgagaac gtaggtgttc tgctgcgtgg 540
tatcaaactg gaagaaatcg aacgtgggtc ggtactgggt aagccggggcw ccatcaagcc 600
rcacactatg ttcgaatctg aagtgtacat tctgtccaaa gacgaaggcg gccgtcatac 660
tccgttcttc aaaggctacc gtccgcagtt ctacttccgt acgactgacg tgactggcac 720
catcgaactg ccggaaggtg ttgagatggg tatgccgggc gacaacatca aaatggttgt 780
taccctgatc caccgatcgc cgatggacga cggctctgctg ttcgcaa 827

```

<210> 28
 <211> 797
 <212> DNA
 <213> *Citrobacter freundii* ATCC 8090

```

<400> 28
cctgggtgtt gctgcgactg acggcccgat gccgcagact cgtgagcaca tcctgctggg 60
tcgtcaggta ggcgttccgt acatcatcgt gttcctgaac aaatgcgaca tggttgatga 120
cgaagagctg ctggaactgg tagaaatgga agttcgtgaa cttctgtctc agtacgattt 180
cccgggacgac gacactccga tcgttcgtgg ttctgtcttg aaagcgctgg aaggcgaagc 240
agagtgggaa gcgaaaatca tcgaactggc tggcttctctg gattcttaca tcccagaacc 300
agagcgtgagc attgacaagc cgttctctgt gcctatcgaa gacgtattct ccatctccgg 360
tcgtgggtacc gttgttaccg gtcgtgtaga gcgcggtatc atcaaagttg gtgaagaagt 420
tgaaatcggt ggtatcaaag agactgctaa gtctacctgt actggcgctg aaatgttccg 480
caaactgctg gacgaaggcc gtgctgggtg gaacgttggg gttctgctgc gtggtatcaa 540
acgtgaagaa atcgaacgtg gtcaggtagt ggctaagccg ggctctatca agccgcacac 600
caagtccgaa tctgaagtg acattctgtc caaagacgaa ggcggccgct atactccgtt 660
cttcaaaggc taccgtccgc agttctactt ccgtactact gacgtgactg gtaccatcga 720
actgccggaa ggcgtagaga tggtaatgcc gggcgacaac atcaaaatgg ttgttaccct 780
gatccacca atcgca 797

```

<210> 29
 <211> 826
 <212> DNA
 <213> *Citrobacter sedlakii* ATCC 51115

```

<400> 29
cggcgcgatc ctggttgttg ccgcgactga cggcccgatg ccgcagaccc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttccgta catcatcgtg ttctgaaca aatgcgacat 120
ggttgatgac gaagagctgc tggaactggg agagatggaa gttcgtgaac tgctgtctca 180
gtacgatttc ccgggcgacg acacgccgat cgttcgtggg tcagctctga aagcgctgga 240
aggcgacgca gagtgggaag cgaaaatcat cgaactgggt ggcttctctg attcttacct 300
tccggaacca gagcgtgcga ttgacaagcc gttcctgctg ccgatcgaag acgtattctc 360
catctccgtt cgtgggtaccg ttgttaccgg tcgtgtagag ccggttatca tcaaagtggg 420
cgaagaagtt gaaatcgttg gtatcaaaga gactgcgaag tctacctgta ctggcggtga 480
aatgttccgc aaactgctgg acgaaggccg tcggggtgag aacgtagggt ttctgctgctg 540
tggtatcaaa cgtgaagaaa tcgaacgtgg tcaggtagtg gcgaagccgg gcaccatcaa 600
gccgcacacc aagttcgaat ctgaagtgtg tattctgtcc aaagatgaag gcggccgtca 660
tactccgttc ttcaaaggct accgtccgca gttctacttc cgtacaactg acgtgactgg 720
caccatcgaa ctgccggaag gcgtagagat ggtaatgccg ggcgacaaca tcaaaatggg 780
tgttaccctg atccaccga tcgcgatgga cgacggtctg cgtttc 826

```

<210> 30
 <211> 823
 <212> DNA
 <213> *Citrobacter werkmanii* ATCC 51114

<400> 30

gcgatcctgg	ttgttgctgc	gactgacggc	ccgatgccgc	agactcgtga	gcacatcctg	60
ctgggtcgtc	aggtaggcgt	tccgtacatc	atcgtgttcc	tgaacaaatg	cgacatgggt	120
gatgacgaag	agctgctgga	actggtagaa	atggaagttc	gtgaacttct	gtctcagtac	180
gatttcccgg	gcgacgacac	tccgatcgtt	cgtgggttctg	ctctgaaagc	gctggaaggc	240
gaagcagagt	gggaagcgaa	aatcatcgaa	ctgggtggct	ttctggattc	ttacatcccg	300
gaaccagagc	gtgcgattga	caagccgttc	ctgctrccta	tcgaagacgt	attctccatc	360
tccggtcgtg	gtaccgttgt	taccggtcgt	gtagagcgcg	gtatcatcaa	agttggtgaa	420
gaagttgaaa	tcgttggtat	caaagacacc	gctaagtcta	cctgtaccgg	cgttgaaatg	480
ttccgcaaac	tgctggacga	aggccgtgct	gggtgagaacg	ttggtgttct	gctgctgggt	540
atcaaactg	aagaaatcga	acgtgggtcag	gtactggcta	agccgggctc	tatcaagccg	600
cacaccaagt	tcgaatctga	agtgtacatc	ctgtccaaag	acgaaggcgg	ccgtcatact	660
ccgttcttca	aaggctaccg	tccgcagttc	tacttccgta	ctactgacgt	gactgggtacc	720
atcgaactgc	cggaaggcgt	agagatggta	atgccggggcg	acaacatyaa	aatgggttgtt	780
acyctgatcc	acccgatcgc	gatggacgac	ggctctgcgtt	tcg		823

<210> 31
 <211> 826
 <212> DNA
 <213> *Citrobacter youngae* ATCC 29935

ggcgcgatcc	tggttggttc	tgcgactgac	ggcccgatgc	cgcagactcg	tgagcacatc	60
ctgctgggtc	gtcaggtagg	cgttccgtac	atcatcgtgt	tcctgaacaa	atgcgacatg	120
gttgatgacg	aagagctgct	ggaactggta	gaaatggaag	ttcgtgaact	tctgtctcag	180
tacgatttcc	cgggcgacga	tacgccgatc	gttcgtgggt	ctgctctgaa	agcgtgggaa	240
ggcgaagcag	agtgggaagc	gaaaatcatc	gaactggctg	gttctctgga	ttcttacatc	300
ccggaaccag	aacgtgctat	cgataagccg	ttcctgctgc	caatcgaaga	cgtattctcc	360
atctccggtc	gtggtaccgt	tgttactggt	cgtgtagaac	gcggtatcat	caaagttgggt	420
gaagaagttg	aaatcgttgg	tatcaaagag	actgccaaat	ctacctgtac	tggcgttgaa	480
atgttccgca	aactgctgga	cgaaggccgt	gctgggtaga	acgttgggtg	tctgctgcgt	540
ggtatcaaac	gtgaagaaat	cgaacgtggt	caggtactgg	ctaagccggg	ctctatcaag	600
ccgcacacca	agttcgaatc	tgaagtgtac	attctgtcca	aagacgaagg	cggccgtcat	660
actccgttct	tcaaaggcta	ccgtccgcag	ttctacttcc	gtactactga	cgtgacgggt	720
accatcgaac	tgccggaagg	cgtagagatg	gtaatgccgg	gcgacaacat	caaaatgggt	780
gttaccctga	tccacccaat	cgcgatggat	gacggctctgc	gtttcg		826

<210> 32
 <211> 841
 <212> DNA
 <213> *Clostridium perfringens* ATCC 13124

cggagctata	ttagtttgtt	cagcagctga	tggtccaatg	cctcaaacaa	gagagcacat	60
cttattatca	tcaagagttg	gagttgacca	catcgtagta	ttcttaaaca	aagcagatat	120
ggttgacgac	gaagaattat	tagaattagt	tgaatggaa	gtagagagt	tattaagcga	180
gtacaacttc	ccaggagacg	ayattccagt	aatcaargga	tcagctttag	tagcattaga	240
aaacccaact	gacgaagctg	caacagcttg	tatcagagag	ttaatggatg	ctgtagatag	300
ctacatcccc	acaccagaaa	gagcaacaga	taagccattc	ttaatgccag	tagaggacgt	360
attcacaatc	actggtagag	gaacagttgc	aacaggaaga	gttgaaagag	gagttctaca	420
tgtaggagac	gaagtagaag	taatcggatt	aactgaagaa	agaagaaaaa	ctgttgtaac	480
aggaatcgaa	atgttcagaa	agttattaga	tgaagcacia	gctggagata	acatcggagc	540
attattaaga	ggtatccaaa	gaactgayat	cgaagagggt	caagtttttag	ctcaagttgg	600
aacaatcaac	ccacacaaaa	aattcgtagg	tcaagtatac	gtacttaaaa	aagaagaagg	660
tggaagacat	actccattct	tcgatggata	cagaccacia	ttctacttca	gaacaacaga	720
cgttacagga	tcaatcaa	taccagaagg	aatggaaatg	gttatgcctg	gagaccacat	780
cgacatggaa	gttgaattaa	tcacagaaat	cgctatggay	gaaggattaa	gattcgctat	840
c						841

<210> 33
 <211> 822
 <212> DNA
 <213> *Comamonas acidovorans* ATCC 15668

<400> 33
cggcgccatc ctggtgtgct cggccgctga cggcccatg cccagacc gcgagcat 60
cctgtggcc cgtcaggtgg gcgtgcccta catcatcgtg ttcctgaaca agtgcgacat 120
ggtggacgac gaagagctgc tggaaactggt cgaaatggaa gtgcgcgagc tgcttgccaa 180
gtacgacttc cccggcgacg acaccccat catccgcggc tcggccaagc tggccctgga 240
aggcgaccag tccgacaagg gcgaacctgc catcctgcgc ctggctgaag cactggactc 300
ctacatcccc acgcccagag gcgctgtgga cggcgccctt gcaatgcccg tggaaagcgt 360
gttctcgatc tctggccgtg gcaccgtggt gactggccgt atcgagcgcg gcatcatcaa 420
ggtcggcgaa gaaatcgaaa tcgtcgggtat ccgcgacacc cagaagacca tcgtcaccgg 480
cgtggaaatg ttccgcaagc tgctggacca aggtcaagct ggcgacaacg tgggtctgct 540
gctgcgcggc accaagcgtg aagacgtgga acgcgccaa gtgctgtgca agcccggtc 600
catcaagccc cacaccact tcacggctga ggtgtacgtg ctgtccaagg acgaaggtgg 660
tcgccacact ccgttcttca acaactaccg tcccagttc tatttccgta cgaccgacgt 720
gaccggctcc atcgagctgc ccgcccagaa ggaaatggtg atgcctggcg acaacgtgtc 780
gatcacctgc aagctgatcg ccccatcgc catggaagaa gg 822

<210> 34
<211> 702
<212> DNA
<213> *Corynebacterium bovis* ATCC 7715

<400> 34
gccgcagacc cgtgagcacg tctcctggc ccgtcaggtc ggtgtgccct acatcctcgt 60
cgccctcaac aagtgcgaca tggtcgacga cgaggacctc atcgagctcg tcgagatgga 120
ggtccgtgag ctccctcgccg agcaggacta cgacgaggac gcccgatca tccacatctc 180
cgccctcaag gccctcgagg gtgacccgga gtggacgcag cgcacgtcg acctcatgaa 240
ggcctgcgac gacgccatcc cggatccgga gcgcgagacg gacaagccgt tctcatgcc 300
gatcgaggac atcttcacga tcaccggccg cggcaccgtc gtcacgggccc gtgtcgagcg 360
tggcatcctc aacgtcaacg aggaggtcga gatcctgggt atctgcgaga actcccagaa 420
gacgaccgtc acctccatcg agatgttcaa caagtctc gacacggccg aggcggcgca 480
caacgcccgc ctgctgctcc gtggcctgaa gcgcgaggac gtcgagcgtg gccagatcgt 540
ggccaagccg ggcgcctaca cgccgcacac cgagttcgag ggctccgtgt acatcctctc 600
caaggacgag ggtggccgccc acacgccgtt cttcgacaac taccgtccgc agttctactt 660
ccggacgacc gacgtcaccg gcgtcgtcaa gctgcggag gg 702

<210> 35
<211> 689
<212> DNA
<213> *Corynebacterium cervicis* NCTC 10604

<400> 35
ggctcagacc cgcgagcacg ttctgcttgc tcgccagggt ggcgttccga cgatcctggt 60
tgccctcaac aaggccgata tggtcgacga tgaggaaatg ctggagctcg ttgaggaaga 120
gtgccgcgac ctgctcgagt cccaggactt cgatcgtgac gcccgatca tccagggttc 180
cgcgctgaag gctctcgaag gtgatccgca gtgggttgc aaggctcgagg agctcatgga 240
ggcagtcgac accttcgtgc cgactcctga gcgcgacatg gacaagccgt tctcatgcc 300
gatcgaagac gtcttcacca tcaccggccg tggcaccgtt gttaccggtc gtgttgagcg 360
tggcaagctc ccgatcaact ctgaggttga aatcctcggt atccgcgaac cgcagaagac 420
caccgttacc ggtatcgaga tgttccacaa gtccatggat gaagcatggg caggcgagaa 480
ctgtgggtctc ctccctgcgtg gcaccaagcg cgatgagggt gagcgcggtc aggtcgttgc 540
cgttcccggg tcgatcacc cgcacaccaa cttcaccgga caggtctaca tctcaagaa 600
ggaagaaggc ggtcgtcaca acccgttctt ctcgaactac cgtccgcagt tctacttccg 660
caccacggac gtgaccggcg tcatcacc 689

<210> 36
<211> 804
<212> DNA
<213> *Corynebacterium flavescens* ATCC 10340

<400> 36
ggttggtgct gcaaccgatg gtcctatgcc gcagaccgc gagcacgttc ttctggctcg 60
ccaggttggc gttccttaca tctcgttgc tcttaacaag tgcgacatgg ttgatgatga 120
ggaaatcatc gagctcgttg agatggaaat ccgcgaactg ctcgctgagc aggactacga 180

cgaggatgcc	cccatcatcc	acatctccgc	tctcaaggct	cttgaggggtg	acgagaagtg	240
ggtacaggcc	atcgtcgacc	tcatgcaggc	ctgcgatgac	tccattccgg	atccggagcg	300
cgagaccgac	aagcccttcc	tcatgcctat	cgaggacatc	ttcaccatca	ccggccgagg	360
taccgttggt	accggccgtg	ttgagcgtgg	cgttttgaag	gtcaacgagg	atgttgagat	420
catcggcatc	aaggagaagt	ccatctccac	caccgttacc	ggtatcgaaa	tgttccgcaa	480
gatgatggac	tacaccgagg	ctggcgacaa	ctgtgggtctg	cttctgcgtg	gtaccaagcg	540
tgaagaggtc	gagcgcggcc	agggttggtat	caagccgggc	gcctacaccc	cccacaccaa	600
gttcgagggg	tccgtctacg	tctcaagaa	ggaagagggc	ggccgccaca	ccccgttcat	660
ggacaactac	cgtcgcagtc	tctacttccg	taccactgac	gtgaccggcg	ttgttcacct	720
gcctgagggc	accgagatgg	tcatgcctgg	cgacaacggt	gatatgaccg	ttgaggtcat	780
ccagcccgtc	gctaggatga	gggc				804

<210> 37
 <211> 692
 <212> DNA
 <213> *Corynebacterium kutscheri* ATCC 15677

<400> 37						
tgcctcagac	ccgtgagcac	gttcttcttg	ctcgccagggt	tggcggttcct	tacatcctcg	60
ttgctcttaa	caagtgcgac	atgggttgacg	atgaggaaat	catcgagctc	gttgagatgg	120
aagttcgcga	gcttcttgct	gagcaggagt	acgatgaaga	ggctccaatc	atccacatct	180
ctgctttgaa	ggctcttgag	ggcgacgaga	agtggactca	ggccatcatc	gacctcatgc	240
aggcttggtg	tgactccatc	ccagatccag	agcgtgagac	cgacaagcca	ttcctcatgc	300
ctatcgagga	tatcttcacc	atcaccggtc	gtggcaccgt	tggtaccggg	cgtgttgagc	360
gcggttcctt	gaagggtgaat	gaggacgtcg	agatcatcgg	catcaaggag	aagtccacca	420
ctactaccgt	taccggtatc	gaaatgttcc	gtaagcttct	tgattacacc	gaagctggcg	480
ataactgtgg	tctgcttctt	cgtggtatca	agcgcgaaga	cggtgagcgt	ggtcaggttg	540
ttgttaagcc	aggcgcttac	acacctcaca	ccgagttcga	gggctctgtt	tacgttcttt	600
ccaaggacga	ggcgggccgc	cacaccccat	tcttcgacaa	ctaccgtcca	cagttctact	660
tccgcaccac	tgacgttacc	ggtggttgta	ag			692

<210> 38
 <211> 797
 <212> DNA
 <213> *Corynebacterium minutissimum* ATCC 23348

<400> 38						
cctgggttggt	gctgcaaccg	atggcccgat	gcccagagacc	cgcgagcacg	ttcttctggc	60
ccgccagggt	ggcgttccgt	acatcctcgt	tgcactgaac	aagtgtgaca	tggttgacga	120
tgaggaaatc	atcgagctcg	ttgagatgga	gatccgtgag	ctgctcgtcg	agcaggacta	180
cgacgaggaa	gctccgatcg	ttcacatctc	cgctctgaag	gctcttgagg	gcgacgagaa	240
gtgggacacg	tccatcggtg	acctgatgca	ggcttgcgat	gactccatcc	cggatccgga	300
gcccagagctg	gacaagccgt	tccgatgcc	gatcgaggac	atcttcacca	ttaccggccg	360
cggtaccggt	gttaccggcc	gtgttgagcg	tggtccctg	aacgttaacg	aggacatcga	420
gatcatcggt	atcaaggaca	agtccatgtc	caccaccgtt	accggtatcg	agatgttccg	480
caagatgatg	gactacaccg	aggctggcga	caactgtggt	ctgcttctgc	tggttaccaa	540
gcgtgaagag	gttgagcgtg	gccagggttg	catcaagccg	ggcgcttaca	ccccgcacac	600
caagttcgag	ggttccgtct	acgtccctgaa	gaagggaagag	ggcgggccgc	acaccccggt	660
catggacaac	taccgtccgc	agttctactt	ccgcaccacc	gacgtcaccg	gtgtcatcaa	720
gctgccggag	ggcaccgaga	tggatcatgcc	gggcgacaa	gttgagatgt	ccgtagagct	780
gatccagccg	gtcgcta					797

<210> 39
 <211> 702
 <212> DNA
 <213> *Corynebacterium mycetoides* ATCC 21134

<400> 39						
gcccagagacc	cgcgagcacg	ttcttctggc	ccgccagggtc	ggcgctcccct	acatcctcgt	60
tgcgtgaac	aagtgcgaca	tggttgatga	tgaggagatc	atcgagctcg	tgagatgga	120
ggctccgtgag	ctgctcggcg	agcaggacta	cgacgaggac	gccccatca	tccacatctc	180
cgctctgaag	gctctcgagg	gcgacgagaa	gtgggttcag	tccgtgctcg	acctcatgca	240
ggcggtgcgac	gactccatcc	cggatccggt	ccgcgagacc	gaccgcgact	tccgtgatgcc	300

```

gatcgaggac atcttcacca tctccggcgc cggcaccgtg gttaccggtc gtgtggagcg 360
cggcgtgctc aacctcaacg acgaggtcga gatcatcggc atccgcgaca agtcccagaa 420
gaccaccgtc acctccatcg agatgttcaa caagctgctc gataccgctg aggcaggcga 480
caacgcggct ctgctgctcc gcggtctgaa gcgcgaggac gtcgagcgctg gccagggttg 540
catcaagccg ggcgccctaca ccccgccacac caagttcgag ggttccgtct acgtcctgtc 600
caaggacgag ggcggccgcc acaccccggt cttcgacaac taccgtccgc agttctactt 660
ccgcaccacc gacgtgaccg gtgttctgaa gctgccggag gg 702

```

<210> 40

<211> 674

<212> DNA

<213> *Corynebacterium pseudogenitalium* ATCC 33038

<400> 40

```

gctcgccagg ttggcggttc ttacatcctc gttgcgctga acaagtgcga catggttgat 60
gatgaggaaa tcatcgagct cgttgagatg gagatccgtg agctgctcgc agagcaggat 120
tacgatgagg aagctcctat cgttcacatc tccgctctga aggccctcga gggcgatgac 180
aagtgggtac agtccgtcgt tgatctgatg gaagcctgcg acaactccat cccggatccg 240
gagcgcgcta cgcaccagcc gttcctgatg cctatcgagg acatcttcac cattaccggc 300
cgcggtaccg ttgttaccgg ccgtgttgag cgtggccgtc tgaacgtcaa cgaggacgtt 360
gagatcatcg gtatccagga gaagtcccag accaccaccg ttaccgggat cgagatgttc 420
cgcaagatga tggactacac cgaggctggc gacaactgtg gtctgcttct gcgtgggtacc 480
aagcgtgagg acgttgagcg tggccagggt gttatcaagc cgggcgctta caccgccac 540
accaagttcg agggctccgt ctacgtcctg aagaaggaa agggcgggcg ccacaccccg 600
ttcatgaaca actaccgtcc gcagttctac ttccgtacca cggacgttac cgggtgttgtt 660
cacctgccag aggg 674

```

<210> 41

<211> 694

<212> DNA

<213> *Corynebacterium renale* ATCC 19412

<400> 41

```

tgcctcagac ccgtgagcac gttctgcttg ctcgtcaggt cggcgttcct tacatcctcg 60
ttgactgaa caagtgcgac atggtcgacg acgaagaaat catcgagctc gtcgagatgg 120
aaatccgtga actgctcgca gagcaggact acgatgagga agctcctatc gttcacatct 180
ccgctctggg cgccctgaac ggcgagcaga agtgggttga ctcctcgtc gaactgatgg 240
aagcttgca caactccatc ccagaccag attcgcgacat cgaccacca ttctgatgc 300
ctatcgagga catcttcacc attaccggtc gcggtaccgt tgttaccggc cgtgtcgagc 360
gtggccgtct caacgtcaac gaagaagtgt agatcatcg tatcaaggac aagtcccaga 420
agaccaccgt caccggatat gagatgttcc gcaagatgct ggactacacc gaagctggcg 480
acaactgtgg tctgctgctc cgcggcatcg ccggtgagga tgtcgagcgt ggccaggtta 540
tcatcaagcc agggctttac accctcact ctgagttcga gggctctgtc tacgtcctgt 600
ccaaggacga ggggtggccg cacaccccat tcttcgacaa ctaccgtcca cagttctact 660
tccgcaccac cgacgtgacc ggcgttgtgc acct 694

```

<210> 42

<211> 687

<212> DNA

<213> *Corynebacterium ulcerans* NCTC 8665

<400> 42

```

gccgcagacc cgcgagcacg ttctgctggc tcgccagggt ggcgttckct acatcctsgt 60
tgcaactgaa aagtgcgaca tgggtgacga tgaggartc ctsgagctcg tcgagatgga 120
ggtcgcgag ctgctggctg agcaggacta cgacgaggaa gctccgrtcg ttcacatctc 180
cgwctgaac gccctggacg gcgacsagaa gtgggctvac tccatcctcg agctgatgca 240
ggcttgcgac gagtccatcc cggatccgga gcgcgagacc gacaagccgt tcctgatgcc 300
gattgaggac atcttcacca ttaccggtcg cgggaccgtt gttaccggcc gtgttgagcg 360
tggcdtccgt aacgtsaacg acgasgttga gatcatgggy atccgggaga agtcccagaa 420
gaccaccgtg acckscatcg agatgttcaa caagmtgmtg gacwccgcag aggctggcga 480
caacgctgsw ctgctgctgc gtggtmtsaa gcgtgaggac gttgagcgtg gccagatcat 540
cgytaagccg ggcgcktaca ccccgccacac cgagttcgag ggctccgtct acgtcctgtc 600
caaggacgag ggcggccgcc acaccccggt cttcgacaac taccgtccgc agttctactt 660

```

ccgcaccacc gacgtsaccg gtgttgt

687

<210> 43

<211> 778

<212> DNA

<213> Corynebacterium urealyticum ATCC 43042

<400> 43

ctgggtgttg	ctgcaaccga	tggccccgatg	ccgcagaccc	gtgagcacgt	tctgctggct	60
cgccagggtt	gcgttccgta	catcctcggt	gcactgaaca	agtgcgacat	ggttgacgat	120
gaggagctcc	tcgagctcgt	cgagatggag	gtccgcgagc	ttctggctga	gcaggactac	180
gacgaggagg	ctccggtcgt	cccgatctcc	gcactgggcg	ccctggacgg	cgatcagaag	240
tgggtcgact	ccatcctcga	gctcatgaag	gcttgcgacg	agtccatccc	ggacccggag	300
cgcgagaccg	acaagccggt	cctgatgccc	gttgaggaca	tcttcaccat	taccggtcgc	360
ggcaccgctc	ttaccggccg	tggttgagcgt	ggcgtcctga	acctgaacga	cgaggctcga	420
atcctgggca	tccgcgagaa	gtccaccaag	accaccgtca	cctccatcga	gatgttcaac	480
aagctgctgg	acaccgcaga	ggctggcgac	aacgctgcac	tgctgctgcg	tggtctgaag	540
cgtgaggacg	tcgagcgagg	ccagatcatc	gctaagccgg	gcgcttacac	cccgcacacc	600
gagttcgagg	gctccgtcta	cgtccgtctc	aaggacgagg	gcggccgtca	caccccgttc	660
ttcgacaact	accgtccgca	gttctacttc	cgtaccaccg	acgtcaccgg	tgctcgttacc	720
ctgccagagg	gcaccgacat	ggtcatgccc	ggcgacaacg	ttgagatgag	cgtcaagc	778

<210> 44

<211> 703

<212> DNA

<213> Corynebacterium xerosis ATCC 373

<400> 44

cgcagacccg	tgagcacgtc	ctcctggccc	gccaggtcgg	cgteccctac	atcctcgtcg	60
ccctgaacaa	gtgcgacatg	gtcgacgatg	aggagatcat	cgagctcgtg	gagatggagg	120
tgcgtgagct	tctcgccgag	caggactacg	acgaggaggc	cccgatcgtg	cacatctccg	180
ccctggggcg	cctcaatggc	gaagagaagt	gggtcgactc	catcgctcga	ctcatgaacg	240
cgtcgacga	gaacgttccg	gacccggtcc	gcgagaccga	caagccgttc	ctgatgcccg	300
tcgaggacat	cttcaccatc	accggccgcg	gcaccgtcgc	caccggctcg	gtggagcgcg	360
gcaccctgaa	ggtcaacgac	gaggtcgaga	tcctgggcat	ccaggagaag	tcccagacca	420
ccaccgtcac	cggcatcgag	atgttccgca	agctgctgga	ctccgccgag	gccggcgaca	480
actgtggcct	gctgctccgc	ggcatcaagc	gcgaggacat	cgagcgcggc	cagatcatcg	540
cgaagccggg	cgcttacacc	cgcacacacc	agttcgaggg	ctccgtctac	atcctggcca	600
aggacgaggg	cggccgccac	accccgttct	tcgacaacta	ccgtccgcag	ttctacttcc	660
gcaccaccga	cgtcaccggc	gtcgtgaagc	tgccggaggg	cac		703

<210> 45

<211> 832

<212> DNA

<213> Coxiella burnetii strain Nine Mile phase II

<400> 45

ggagcgatat	tggtggtgag	cgcagcggac	ggccccgatgc	cgcaaacgcg	ggaacacatt	60
gtattggcga	agcaagtggg	tgttccgaac	atagtggttt	acttgaacaa	agcggacatg	120
gtggatgaca	aagagctggt	ggaattagtg	gaaatggaag	tgagggattt	attgaacagt	180
tatgatttcc	ctggggatga	gacgccgata	atagtggggt	cagcggtaaa	ggcgttagaa	240
ggtgacaaga	gtgaggttgg	ggagccatcg	ataatcaa	tagtggaac	gatggacacg	300
tacttcccgc	agccggagcg	agcgatagac	aaaccgtttt	taatgccgat	cgaagatgtg	360
ttttcgatat	cgggccgagg	gacgggtggtg	acgggacgcg	tagagcgagg	gatcatcaaa	420
gtgggcgacg	agatagagat	tgtggggatc	aaggacacga	cgaagacgac	gtgcacgggc	480
ggtgagatgt	ttcgcaaatt	attggatgaa	ggtcaagcgg	gtgacaacgt	aggaatttta	540
ttgagaggga	cgaaacgcga	agaagtggag	cgtgggtcaag	tattggcgaa	accgggatcg	600
atcacgccac	acaagaaatt	tgaggcggag	atztatgtgt	tgtcgaagga	agaaggggga	660
cgccacacac	cgttttttaca	aggctatcga	ccgcaatttt	atctccgcac	gacggacgtg	720
acggggccagt	tattgagttt	accggagggg	atagagatgg	tgatgccggg	agataacgtg	780
aaagtgacgg	ttgaattgat	tgcgccggta	gcgatggatg	aagggtctacg	at	832

<210> 46
 <211> 816
 <212> DNA
 <213> Edwardsiella hoshinae ATCC 33379

```

<400> 46
ggcgcctatcc tgggttggtgc tgcgactgac ggcccgatgc cgcagacccg tgagcacatc 60
ctgctgggtc gccaggtagg cgttccgtac atcatcgtgt tcctgaacaa gtgcgacatg 120
gttgatgacg aagagctgct ggaactgggt gagatggaag ttccgcgaact gctgtctcag 180
tacgatttcc cgggcgacga tacgccggta atccgcgggt ctgcgctgaa agcgcctggaa 240
ggcgaagccg agtgggaagc gaagatcatc gaactggctg aaacgctgga ctccctacatt 300
ccggaacctg agcgtgacat cgacaagccg ttccctgctgc cgatcgaaga cgtattctca 360
atctctggtc gtggtaccgt tgttaccggt cgtgtagagc gcggtatcat caaggtaggc 420
gacgaagttg aaatcgtagg tatcaagccg accaccaaga ctacctgtac tggcggtgaa 480
atgttccgca aactgctgga cgaaggccgt gctggtgaga acgtagggtg tctgctgctg 540
ggtaccaagc gtgacgaaat cgaacgtggt caggtactgg ctaagccggg caccatcact 600
ccgcacacca agttcgaatc agaagtgtac atcctgagca aggatgaagg cggccgctcat 660
actccgttct tcaaaggcta ccgtccgcag ttctacttcc gtaccactga cgtgactggc 720
accatcgaac tgccggaagg cgtagagatg gtaatgccgg gcgacaacat caagatggtt 780
gttaccctga tccacccgat cgccatggac gatggt 816
  
```

<210> 47
 <211> 821
 <212> DNA
 <213> Edwardsiella tarda ATCC 15947

```

<400> 47
ggcgcgatcc tgggttggtgc tgcgactgac ggcccgatgc cgcagacccg tgagcacatc 60
ctgttggtgc gccaggtagg cgttccgtac atcatcgtgt tcctgaacaa gtgcgacatg 120
gttgatgacg aagagctgct ggaactgggt gagatggaag ttccgcgaact gctgtctcag 180
tacgacttcc cgggcgacga cacgccggta atccgcgggt ctgcgctgaa agcgcctggaa 240
ggcgaagccg agtgggaagc gaagatcatc gaactggctg aaactctgga ctccctacatc 300
ccggaacctg agcgtgacat cgacaagccg ttccctgctgc cgatcgaaga cgtattctct 360
atctctggcc gtggtaccgt tgttaccggt cgtgtagagc gcggtatcat caaggtaggc 420
gacgaagttg aaatcgttgg tatcaagccg accaccaaga ccacctgtac tggcggtgaa 480
atgttccgca aactgctgga cgaaggccgt gctggtgaga acgttgggtg tctgctgctg 540
ggtactaagc gtgacgaaat cgaacgtggt caggtactgg ctaagccggg caccatcact 600
ccgcacacca agttcgaatc tgaagtgtac atcctgagca aggatgaagg cggccgctcat 660
actccgttct tcaaaggcta ccgtccgcag ttctacttcc gtactactga cgtgactggt 720
accatcgaac tgccggaagg cgtagagatg gtaatgccgg gcgacaacat caagatggtt 780
gttaccctga tccacccgat cgccatggac gatggtctgc g 821
  
```

<210> 48
 <211> 830
 <212> DNA
 <213> Eikenella corrodens ATCC 23834

```

<400> 48
cgggtgccatc ctggttggtat ccgctgctga cggcccatg cctcagactc gcgaacacat 60
cctgttggtc cgtcaggtag gtgtacccta catcctcgta ttcatgaaca aatgcgacat 120
ggtagatgat gccagctgct ttgagttggt tgagatggaa atccgcgacc tgctctccag 180
ctatgacttc cctggtgacg actgcccgat cgtacaagg tccgctctca aagccctcga 240
aggcgatgcc gggtacaaag aaaaaatctt cgaactagct gctgctttgg atagctacat 300
ccccactcct caacgtgctg tagacaaacc ctctctggtt ccgatcgaag acgtattctc 360
tatctccggc cgtggtaccg tagtaaccgg tcgtgtagag cgcggcatca tcaaagtagg 420
tgaagagatc gaaatcgttg gtctgaagcc cactcagaaa actacctgta ctggcgtgga 480
aatgttccgc aaactgctgg acgaaggtea gcccggtgac aacgtaggcg tactgctgcg 540
cggtaacaaa cgtgaagaag ttgagcgtgg tcaagtattg gctaaacccg gcaccatcac 600
tccgcacacc aagttcaaag ccgaagtata cgtattgagc aaagaagaag gtggtcgtca 660
caccocgttc tttgccaaact accgtccaca gttctacttc cgtactactg acgtaaccgg 720
tgctgtagag ctggagcctg gtgtagaaat gggtatgcct ggtgagaacg taaccatcac 780
cgtagaactg attgctccga ttgctatgga agaaggctcg cgctttgcga 830
  
```

<210> 49
<211> 808
<212> DNA
<213> Enterobacter aerogenes ATCC 13048

<400> 49
ggcgcgatcc tgggttgttg tgcgactgac ggcccgatgc cgcagactcg tggagcacatc 60
ctgctgggtc gtcaggtagg cgttcctgac atcatcgtgt ttcctgaaca atgcgacatg 120
gttgatgacg aagagctgct ggaactgggt gagatggaag ttcgtgaact gctgtctcag 180
tacgatttcc cgggcgacga cactccgatc gttcgtgggt ctgctctgaa agcgctggaa 240
ggcgacgcag agtgggaagc gaaaatcatc gaactggctg gcttcctgga ttcttacatc 300
ccrgaaccag agcgtgcatg tgacaagccg ttcctgctgc cgatcgaaga cgtattctcc 360
atctccggtc gtggtaccgt tgttaccggt cgtgtagagc gcggtatcat caaagttggt 420
gaagaagttg aaatcgttgg tatcaaagac accgcgaaaa ccacctgtac tggcgttgaa 480
atgttccgca aactgctgga cgaaggccgt gctggtgaga acgtaggygt tctgctgcgt 540
ggtatcaaac gtgaagaaat cgaacgtggg caggtagctg ctaagccggg cagcatcaag 600
ccgcacacca agttcgaatc tgaagtgtac atcctgtcca aagacgaagg cggccgtcat 660
actccgttct tcaaaggcta ccgtccgcag ttctacttcc gtactactga cgtgactggg 720
accatcgaac tgccggaagg cgtagagrtg gtaatgccgg gcgacaacat caaaatgggt 780
gttaccctga tccaccgat cgcgatgg 808

<210> 50
<211> 828
<212> DNA
<213> Enterobacter agglomerans ATCC 27989

<400> 50
cggcgcgatc ctggttgttg ctgcgactga cggcccgatg ccgcagactc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttccgta catcatcgtg ttcctgaaca aatgtgacat 120
ggttgatgac gaagagctgc tggaactggg tgaatggaa gttcgtgaac ttctgtctca 180
gtacgatttc ccgggcgacg atactccgat cgttcgtggg tctgctctga aagcgctgga 240
aggcgamgcw gagtgggaag cgaaaatcat cgarctgggt ggccacctgg atacctatat 300
cccggaaacca gagcgtgcca ttgacaagcc gttcctgctg ccgatcgaag acgtattctc 360
catctccggt cgcggtaccg ttgttaccgg tegtgtagag cgcggtatca tyaaagtggg 420
cgaagaagtt gaaatcgttg gtatcaaaga tacygcgaaa tcaacctgta ccggcgttga 480
aatgttccgc aaactgctgg acgaaggccg tgctggtagg aacgttgggt ttctgctgcg 540
tggtatcaaa cgtgaagaaa tcgaacgtgg tcaggtactg gctaagccgg gcaccatcaa 600
gccgcacacc aagttcgaat ctgaagtgtg cattctgtcc aaagatgaag gcggtcgta 660
cactccgttc ttcaaaggct accgtccsca gttctacttc cgtacaactg acgtgactgg 720
caccatcgaa ctgccggaag gcgtagagat ggtaatgccg ggcgacaaca tcaaaatggg 780
tgttaccctg atccaccga tcgcgatgga cgacggtctg cgttcgca 828

<210> 51
<211> 825
<212> DNA
<213> Enterobacter amnigenus ATCC 33072

<400> 51
tggcgcgatc ctggttgttg ctgcaactga tggccctatg ccacagacgc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttcccta catcatcgtg ttcctgaaca aatgagacat 120
ggttgatgac gaagagctgc tggaactggg agaaatggaa gttcgtgaac ttctgtctca 180
gtacgatttc ccaggtagg acactccaat catccgtggg tctgctctga aagcgctgga 240
aggcgaagca gagtgggaag ctaaaatcgt tgagctgggt ggctacctgg attcttacat 300
cccggaaacca gaacgtgcta tcgataagcc attcctgctg ccaatcgaag acgtattctc 360
tatctccggc cgtggtagtg ttgtaaccgg tegtgtagag cgcggtatcg ttaaggtgg 420
cgaagaagtt gaaatcgttg gtatcaaaga gactgctaag tctacctgta ctggcgttga 480
aatgttccgc aaactgctgg acgaaggccg tgctggtagg aacgttgggt ttctgctgcg 540
tggtatcaaa cgtgaagaaa tcgaacgtgg tcaggtactg gctaagccag gctcaatcaa 600
gccgcacacc aaattcgaat ctgaagttta tattctgtcc aaagatgaag gcggccgtca 660
tactccgttc ttcaaaggct accgtccaca gttctacttc cgtacaactg acgtgaccgg 720
caccatcgaa ctgccagaag gcgtagagat ggtaatgccg ggcgacaaca ttcagatggg 780
tgttaccctg atccacccaa tcgcgatgga tgacggtctg cgttt 825

<210> 52
<211> 822
<212> DNA
<213> *Enterobacter asburiae* ATCC 35953

<400> 52
cggcgcgcatc ctggttgttg ctgcgactga cggcccaatg cctcagactc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttccttt catcatcgtg ttcctgaaca aatgcgacat 120
ggttgatgac gaagagctgc tggaaactgg agagatggaa gtctgtctca 180
gtacgatttc ccgggcgacg atactccaat cgttcgtggt tctgctctga aagcgtgga 240
aggcgacgca gagtgggaag cgaaaatcat cgaactggct ggcttcctgg attcttacct 300
cccagaacca gagcgtgcga ttgacaagcc attcctgctg ccaatcgaag acgtattctc 360
catctccggt cgtggtaccg ttgttaccgg tcgtgtagag cgcggtatca tcaaagttgg 420
cgaagaagtt gaaatcggtg gtatcaaaga gactgctaag tctacctgta ctggcggtga 480
aatgttcgcg aaactgctgg acgaaggccg tgctggtag aacgttggtg ttctgctgcg 540
tggtatcaaa cgtgaagaaa tcgaacgtgg tcaggttctg gcgaagccag gctcaatcaa 600
gccacacacc aagttcgaat ctgaagtgtg catcctgtcc aaagacgaag gcggccgtca 660
tactccgttc ttcaaaggct accgtccaca gttctacttc cgtacaactg acgtgaccgg 720
taccatcgaa ctgccagaag gcgttagagat ggtaatgccg ggcgacaaca tcaagatggg 780
tgtgactctg atccacccaa tcgcgatgga cgacggctctg cg 822

<210> 53
<211> 826
<212> DNA
<213> *Enterobacter cancerogenus* ATCC 35317

<400> 53
cggcgcgcatc ctggttgttg ctgcgactga cggcccaatg cctcagactc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttcctta catcatcgtg ttcctgaaca agtgcgacat 120
ggttgatgac gaagagctgc tggaaactgg agaaatggaa gtctgtctca 180
gtacgatttc ccaggcgacg acactccaat cgttcgtggt tccgcgctga aagcgtgga 240
aggcgaagct gagtgggaag caaaaatcat cgaactggct ggcttcctgg attcttacct 300
cccagaacca gagcgtgcga ttgacaagcc attcctgctg ccaatcgaag acgtattctc 360
catctccggt cgtggtaccg ttgttaccgg tcgtgtagag cgcggtatca tcaaagttgg 420
tgaagaagtt gaaatcggtg gtatcaaaga tactgckaaa tctacctgta ctggcggtga 480
aatgttcgcg aaactgctgg acgaaggccg tgctggtag aacgttggtg ttctgctgcg 540
tggtatcaaa cgcgaagaaa tcgaacgtgg tcaggttctg gcgaagccag gctcaatcaa 600
gccacacacc aagttcgaat ctgaagtgtg catcctgtcc aaagacgaag gcggccgtca 660
tactccgttc ttcaaaggct accgtccaca gttctacttc cgtacaactg acgtgaccgg 720
taccatcgaa ctgccagaag gcgttagagat ggtaatgccg ggcgacaaca tcaagatggg 780
tgtgacgctg atccacccaa tcgcgatgga cgacggctctg cgtttc 826

<210> 54
<211> 806
<212> DNA
<213> *Enterobacter cloacae* ATCC 13047

<400> 54
gatacctggta gtagctgcga ctgacggccc aatgcctcag actcgtgagc acatcctgct 60
gggtcgtcag gtaggcgttc cttacatcat cgtgttcctg aacaaatgcg acatgggtga 120
tgacgaagag ctgctggaac tggtagagat ggaagtctgt gaactgctgt ctacgtacga 180
tttcccaggc gacgataccc caatcgttcg tggttctgct ctgaaagcgc tgggaaggcga 240
cgcagagtgg gaagmgaaaa tcatcgaact ggctggctac ctggattctt acatcccaga 300
accagagcgt gcgattgaya agccattcct gctgccaatc gaagacgtat tctccatctc 360
cggctcgtgg accgttggtt ccggctcgtg agagcgcggg atcatcaaag tgggtgaaga 420
agttgaaatc gttggtatca aagagactgc gaagtctacc tgtactggcg ttgaaatggt 480
ccgcaaaactg ctggacgaag gccgtgctgg tgagaacggt ggtgttctgc tgcgtgggtat 540
caaactgtgaa gaaatcgaac gtgggtcagg tctggcgaag ccaggctcaa tcaagccaca 600
caccaagtcc gaatctgaag tgtacatcct gtccaaagac gaaggcggcc gtcatactcc 660
gttcttcaaa ggctaccgtc cacagttcta cttccgtaca actgacgtga ccggtaccat 720
cgaactgccg gaaggcgtag aggtggtaat gccaggcgac aacatcaaga tggttgtgac 780
tctgatccac ccaatcgcca tggacg 806

<210> 55
<211> 826
<212> DNA
<213> *Enterobacter gergoviae* ATCC 33028

<400> 55
cggcgcgcatc ctggttgttg ctgcgactga cggcccgatg ccgcagaccc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttccgta catcatcgtg ttcctgaaca agtgcgacat 120
ggttgatgac gaagagctgc tggaaactgg agagatggaa gtctgtgaac tgctgtctca 180
gtacgatttc ccgggcgacg acaccccgat cgttcgcggt tctgcgctga aagcgtgga 240
aggcgacgca gagtgggaag cgaaaatcat cgaactgggt ggccacctgg atacctayat 300
cccgaacca gagcgtgcga ttgacaagcc gttcctgctg ccgatcgaag acgtattctc 360
catttccggt cgtggtaccg ttgttaccgg tctgttagag cgcggtatca tcaaggttgg 420
tgaagaagtt gaaatcggtg gtatcaaaga caccgcgaaa accacctgta ctggcggttg 480
aatgttccgc aaactgctgg acgaaggccg tgctggtag aacgtcggcg ttctgtgcg 540
tggtatcaag cgtgaagaaa tcgaactggg tcaggtagtg gctaagccgg gctccatcaa 600
gccgcacacc aagttcgaat ctgaagtgtg catcctgtcc aaagacgaag gcggccgtca 660
cactccgttc ttcaaaggct accgtccgca gttctacttc cgtacaactg acgtgactgg 720
caccatcgaa ctgccggaag gcgtagagat ggtaatgccg ggcgacaaca tcaagatggg 780
tgttaccctg atccacccga tcgcgatgga cgacggtctg cgtttc 826

<210> 56
<211> 829
<212> DNA
<213> *Enterobacter hormaechei* ATCC 49162

<400> 56
ggcgcgatcc tgggttgttg tgccgactgac ggccctatgc ctcagacccg tgagcacatc 60
ctgctgggtc gtcaggtagg cgttccttac atcatcgtgt tcctgaacaa atgcgacatg 120
gttgatgacg aagagctgct ggaactggta gagatggaag ttctgtaact gctgtctcag 180
tacgatttcc caggcgacga caccccaatc gttcgtgggt ccgcgctgaa agcgtctgga 240
ggcgamgcag agtgggaagm gaaaatcatc garctggctg gcttcctgga ttcttacatc 300
ccagaaccag agcgtgcgat tgacaagcca ttcctgtgc caatcgaaga cgtattctcc 360
atctccgtc gtggtaccgt tgttaccggt cgtgtwagc gcggtatcat caaagtaggt 420
gaagaagttg aaatcggttg tatcaaagag actgcgaagt ctacctgtac tggcggtgaa 480
atgttccgca aactgctgga cgaaggccgt gctgggtgaga acgttgggtg tctgctgcgt 540
ggtatcaaac gtgaagaaat cgaacgtggg caggttcttg cgaagccagg ctcaatcaag 600
ccacacacca agttcgaate tgaagtgtac attctgtcca aagacgaagg cgcccgatc 660
actccgttct tcaaaggcta ccgtccacag ttctacttcc gtacaactga cgtgaccggt 720
accatcgaa tgccagaagg cgtagagatg gtaatgccag ggcgacaacat caagatgggt 780
gtgacgctga tccacccaat cgcgatggac gacggtctgc gtttcgcaa 829

<210> 57
<211> 831
<212> DNA
<213> *Enterobacter sakazakii* ATCC 29544

<400> 57
ggcgcctatcc tgggttgttg tgccgactgac ggcccgatgc ccgagacccg tgagcacatc 60
ctgctgggtc gtcaggtagg cgttccttac atcatcgtgt tcctgaacaa atgcgacatg 120
gttgatgacg aagagctgct ggaactgggt gagatggaag tgcgcgagct gctgtctcag 180
tacgacttcc cgggcgacga caccccgatc gttcgtgggt ctgctctgaa agcgtctgga 240
ggcgacgctg agtgggaagc gaaaatcatc gagctggcag gtcacctgga ttctacatc 300
ccggaaccgg agcgtgcgat tgacaagccg ttcctgtctg cgatcgaaga cgtattctcc 360
atctcygggt gtggtaccgt tgttaccggt cgtgtagagc gcggtatcat caaggttggg 420
gaagaagttg aaatcggtgg catcaaagac accgcgaaat ccacctgtac cggcggtgaa 480
atgttccgca aactgctgga cgaaggccgt gcgggcgaga acgtagggtg tctgctgcgt 540
ggtatcaaac gtgaagaaat cgaacgtggg caggtagctg ctaagccggg ctccatcaag 600
ccgcacacca agttcgaatc tgaagtgtac attctgtcca aagatgaagg cggccgtcac 660
actccgttct tcaaaggcta ccgtcccgag ttctacttcc gtacraactga cgtgactggc 720
accatcgaa tgccggaagg cgttagatg ttaatgccgg ggcgacaacat caaatgggt 780
gttaccctga tccacccgat cgcgatggac gacggtctgc gtttcgcaat c 831

<210> 58
 <211> 835
 <212> DNA
 <213> *Enterococcus casseliflavus* ATCC 25788

<400> 58
 cggcgcgcatc ttagtagtat ctgctgctga tggtcctatg cctcaaacac gtgaacacat 60
 cttgttatca cgtaacgttg gtgtaccata catcgctggt ttcttaacaa aaatggatat 120
 ggttgatgac gaagaattac tagaattagt tgaaatggaa gttcgtgact tattgtcaga 180
 atatgacttc ccaggcgacg atgttcctgt aatcgctggt tctgctttga aagctcytga 240
 aggcgatgct tcatacgaag aaaaaatcat ggaattaatg gctgcagttg acgaatacgt 300
 tccaactcca gaacgtgaca ctgacaaacc attcatgatg ccagtcgaag acgtattctc 360
 aatcactgga cgtggtactg ttgctacagg ccgtgttgaa cgtggacaag ttcgcgttgg 420
 tgacgaagtt gaaatcgttg gtattgctga agaaactgct aaaacaactg taactggtgt 480
 tgaatgttc cgtaaattgt tagactatgc tgaagcaggg gataacattg gtgcattgct 540
 acgtggtggt gctcgtgaag acatccaacg tggacaagta ttggctaaag ctggtacaat 600
 cacacctcat acaaaattta aagctgaagt ttacgtttta acaaaagaag aagggtggacg 660
 tcacacacca ttcttacta actaccgtcc tcagttctac ttccgtacaa ctgacgtaac 720
 tgggtgtgtt gaattaccag aaggaactga aatggttatg cctggtgata acgtaacaat 780
 cgacgttgaa ttgatccacc caatcgctat cgaagacgga actcgtttct caatt 835

<210> 59
 <211> 826
 <212> DNA
 <213> *Enterococcus cecorum* ATCC 43198

<400> 59
 ggtgctatct tagtagtata tgctgctgat ggtcctatgc cacaaactcg tgaacacatt 60
 cttttatcac gtaacgttgg tgttccatac atcgctggtt tcttaacaa agttgatatg 120
 gttgacgacg aagaattatt agaattagt gaaatggaag tacgtgactt attaactgaa 180
 tacgacttcc caggagacga tgttcctgta atcgctggtt ctgcattaaa agcttttagaa 240
 ggcgacccat cttacgaaga aaaaatctta gaattaatgg ctgcagttga cgaatacatc 300
 ccaactccag aacgtgacaa cgataaacca ttcatgatgc cagtcgaaga cgtattttca 360
 atcactggtc gtggtactgt tgctacaggt cgtgttgaac gtggacaagt acgtgttggt 420
 gacgaagttg aaatagttgg tatccatgat gaaatttcta aaacaacagt tactggtgtt 480
 gaaatgttcc gtaaatattt agattacgct gaagctggag acaacatcgg tgcattatta 540
 cgtggtgtgg ctcgtaaga tatccaacgt ggtcaagtat tagctaaacc aggttcaatc 600
 actccacata caaaattcac tgctgaagtg tacgttttaa cttaaagaaga aggtggacgt 660
 catactccat tcttactaa ctaccgtcca caattctact tccgtacaac tgagttaca 720
 ggtgtagtta acttaccaga aggtactgaa atggttatgc ctggtgataa cgtaactatg 780
 gaagttgaat taatccaccc aatcgctatc gaagacgga ctcggt 826

<210> 60
 <211> 835
 <212> DNA
 <213> *Enterococcus dispar* ATCC 51266

<400> 60
 cggcgcgcatc ttggtagtat ctgctgctga tggtcctatg cctcaaactc gtgaacacat 60
 cctattgtca cgtaacgttg gtgttcctta catcgctggt ttcttgaaca aaatggacat 120
 ggttgatgac gaagaattat tagaattagt tgaaatggaa gttcgtgact tattgtcaga 180
 atacgacttc ccaggcgacg acactccagt tatcgaggt tcagctttga aagccttaga 240
 aggcgacgct tcatatgaag aaaaaatctt agaattaatg gctgcagttg acgaatatat 300
 cccaactcca gttcgtgata ctgacaaacc attcatgatg ccagtcgaag atgtattctc 360
 aatcactggt cgtggtactg ttgcaactgg tctgtgtgaa cgtggacaag ttcgcgttgg 420
 tgacgaagtt gaaatcgtag gtatcgctga agaaactgct aaaactactg taacagggtgt 480
 tgaatgttc cgtaaattgt tggattacgc tgaagctggc gacaacattg gtgcattatt 540
 acgtggtgtg gctcgtgaag atatccaacg tggtaagta ttatcaaaac caggttcaat 600
 cactccacat acaaaatttg cggcagaagt ttacgtttta actaaagaag aagggtggacg 660
 tcatactcca ttcttacta actaccgccc acaattctac ttccgtacaa ctgacgtaac 720
 aggtgttgtt gaattaccag aaggtactga aatggttatg cctggcgata acgttactat 780
 ggacgttgaa ttaatccacc caatcgcgat cgaagacggt actcgtttct caatc 835

<210> 61
 <211> 835
 <212> DNA
 <213> Enterococcus durans ATCC 19432

```

<400> 61
cggagctatc ttagtagttt ctgctgctga tggccctatg cctcaaactc gtgaacatat 60
cctattatct cgtcaagttg gtgttcctta catcgtygta ttcttgaaca aagtagatat 120
ggtcgatgac gaagaattac tagaattagt tgaaatggaa gttcgtgact tattaacaga 180
atacgaattc cctggtgacg atgttcctgt aatcgctggt tcagctttga aagctttaga 240
aggcgcgct tcatacgaag aaaaaatcct tgaattaatg gctgcagttg acgaatatat 300
cccaactcca gaacgtgaca acgacaaaacc attcatgatg ccagttgaag atgtattctc 360
ratcactggt cgtggtagtg ttgctacagg tcgtgttgaa cgtggacaag ttccgcgttg 420
tgacgttgta gatatcgttg gtatcgcaga agaaacagct caaacaacag ttactggtgt 480
tgaaatgttc cgtaaattat tagrctacgc tgaagctgga gacaacattg gtgctttact 540
acgtggtgtt gcacgtgaag acatccaacg tggacaagtt ttagctaaac caggtacaat 600
cackcctctt acaaaattct ctgcagaagt atacgtgttg actaaagaag aagggtggacg 660
tcatactcca ttcttacta actaccgtcc acaattctac ttccgtacaa ctgacgtaac 720
aggtgttggt gaattaccag aaggaactga aatggttatg cctggcgaca acgtaacaat 780
ggaagttgaa ttaatccacc caatcgctat cgaaaatggt actaaattct caatc 835
    
```

<210> 62
 <211> 680
 <212> DNA
 <213> Enterococcus faecalis strain R610

```

<400> 62
agtagtttct gctgctgatg gtcctatgcc tcaaacacgt gaacatatct tattatcacg 60
taacgttggg gtaccatata tcgttgattt cttaaacaata atggatatgg ttgatgacga 120
agaattatta gaattagtag aaatggaagt tcgtgactta ttatcagaat acgatttccc 180
aggcgatgat gttccagtta tcgcagggtc tgctttgaaa gctttagaag gcgacgagtc 240
ttatgaagaa aaaatccttag aattaatggc tgcagttgac gaatatatcc caactccaga 300
acgtgatact gacaaaccat tcatgatgcc agtcgaagac gtattctcaa tcaactggacg 360
tggtactggt gctacaggcc gtgttgaacg tgggtgaagt cgcgttgggt acgaagtga 420
aatcgttggg attaaagacg aaacatctaa aacaactggt acaggtgttg aaatgttccg 480
taaattatta gactacgctg aagcaggcga caacatcggt gctttattac gtggtgtagc 540
acgtgaagat atcgaacgtg gacaagtatt agctaaacca gctacaatca ctccacacac 600
aaaattcaaa gctgaagtat acgtattatc aaaagaagaa ggcgagacgc acactccatt 660
cttcactaac taccgtcctc
    
```

<210> 63
 <211> 680
 <212> DNA
 <213> Enterococcus faecalis strain R487

```

<400> 63
agtagtttct gctgctgatg gtcctatgcc tcaaacacgt gaacatatct tattatcacg 60
taacgttggg gtaccatata tcgttgattt cttaaacaata atggatatgg ttgatgacga 120
agaattatta gaattagtag aaatggaagt tcgtgactta ttatcagaat acgatttccc 180
aggcgatgat gttccagtta tcgcagggtc tgctttgaaa gctttagaag gcgacgagtc 240
ttatgaagaa aaaatccttag aattaatggc tgcagttgac gaatatatcc caactccaga 300
acgtgatact gacaaaccat tcatgatgcc agtcgaagac gtattctcaa tcaactggacg 360
tggtactggt gctacaggcc gtgttgaacg tgggtgaagt cgcgttgggt acgaagtga 420
aatcgttggg attaaagacg aaacatctaa aacaactggt acaggtgttg aaatgttccg 480
taaattatta gactacgctg aagcaggcga caacatcggt gctttattac gtggtgtagc 540
acgtgaagat atcgaacgtg gacaagtatt agctaaacca gctacaatca ctccacacac 600
aaaattcaaa gctgaagtat acgtattatc aaaagaagaa ggcgagacgc acactccatt 660
cttcactaac taccgtcctc
    
```

<210> 64
 <211> 685
 <212> DNA
 <213> Enterococcus faecium strain R482

<400> 64
agtagtttct gctgctgacg gcccaatgcc tcaaactcgt gaacacatcc tattgtctcg 60
tcaagttggt gttccttaca tcgttgtatt cttgaacaaa gtagacatgg ttgatgacga 120
agaattacta gaattagttg aaatggaagt tcgtgaccta ttaacagaat acgaattccc 180
tggtgacgat gttcctgtag ttgctggatc agctttgaaa gctctagaag gcgacgcttc 240
atacgaagaa aaaattcttg aattaatggc tgcagttgac gaatacatcc caactccaga 300
acgtgacaac gacaaacatc tcatgatgcc agttgaagac gtgttctcaa ttactggacg 360
tggtactggt gctacaggtc gtgttgaacg tggacaagtt cgcgttggtg acgaagttga 420
agttgttggg attgctgaag aaacttcaaa aacaacagtt actggtggtg aaatgttccg 480
taaattgtta gactacgctg aagctggaga caacattggg gctttactac gtggtgttgc 540
acgtgaagac atccaacgtg gacaagtttt agctaaacca ggtacaatca cacctcatac 600
aaaattctct gcagaagtat acgtgttgac aaaagaagaa ggtggacgtc atactccatt 660
cttcactaac taccgtcttc aattt 685

<210> 65
<211> 825
<212> DNA
<213> *Enterococcus flavescens* ATCC 49996

<400> 65
cggcgcgatc ttagtagtat ctgctgctga tggtcctayg cctcaaacac gtgaacacat 60
cttgttatca cgtaacgttg gtgtaccata catcgttggt ttcttaaaca aaatggatat 120
ggttgatgac gaagaattac tagaattagt tgaaatggaa gttcgtgact tattgtcaga 180
atatgacttc ccaggcgacg atgttcctgt aatcgctggg tctgctttga aagctcttga 240
aggcgtatgct tcatacgaag aaaaaatcat ggaattaatg gctgcagttg acgaatacgt 300
tccaactcca gaacgtgaca ctgacaaacc attcatgatg ccagtcgaag acgtattctc 360
aatcactgga cgtggtactg ttgctacagg ccgtgttgaa cgtggacaag ttcgcgttgg 420
tgacgaagtt gaaatcgttg gtattgctga agaaactgct aaaacaactg taactgggtg 480
tgaaatgttc cgtaaattgt tagactatgc tgaagcaggg gataacattg gtgcattgct 540
acgtgggggt gctcgtgaag acatccaacg tggacaagta ttagctaaag ctggtacaat 600
cacacctcat acaaaattta aagctgaagt ttacgtttta acaaaagaag aaggtggacg 660
tcacactcca ttcttacta actaccgtcc tcagttctac ttccgtacaa ctgacgtaac 720
tggtgttggt gaattaccag aaggaactga aatggttatg cctggtgata amgtaacaat 780
cgacgttgaa ttgatccacc caatcgctat cgaagacgga actcg 825

<210> 66
<211> 636
<212> DNA
<213> *Enterococcus gallinarum* strain R420

<400> 66
tcctatgcct caaactcgtg aacacatctt gttatcacgt aacggttggcg taccatacat 60
cgttgttttc ttgaacaaaa tggatatggt tgatgacgaa gaattgctag aattagttga 120
aatggaagtt cgtgacctat tgtctgagta tgacttccca ggcgacgatg ttcctgtaat 180
cgccggttct gctttgaaag ctcttgaagg agatccttca tacgaagaaa aaatcatgga 240
attgatggct gcagttgacg aatacgttcc aactccagaa cgtgatactg acaaaccatt 300
catgatgccg gtcgaagacg tattctcaat cactggacgt ggtactgttg ctacaggccg 360
tggtgaacgt ggacaagttc gcgttggtga tgaagtagaa atcgttggta ttgctgacga 420
aactgctaaa acaactgtaa caggtgttga aatgttccgt aaattgttag actatgctga 480
agcaggggat aacattgggt cattgctacg tggggttgct cgtgaagaca tccaacgtgg 540
acaagtattg gctaaagctg gtacaatcac acctacata aaattcaaag ctgaagtta 600
tgttttgaca aaagaagaag gtggacgtca cactcc 636

<210> 67
<211> 835
<212> DNA
<213> *Enterococcus hirae* ATCC 8043

<400> 67
cggagctatc ttagtagttt ctgctgctga tggtcctatg cctcaaactc gtgaacatat 60
cctaytatct cgtcaagttg gtgttccata catcgttgta ttcttgaaca aagtagatat 120
ggttgacgac gaagaattac tagaattagt tgaaatggaa gttcgtgact tattaacaga 180
atacgaattc cctggtgacg atgttcctgt agttgctggg ycagctttga aagctttaga 240

aggcgacgct	tcatacgaag	aaaaaatcct	tgaattgatg	gctgcagttg	acgaatatat	300
cccaactcca	gaacgtgaca	acgacaaacc	attcatgatg	ccagtcgaag	acgtattctc	360
aatcactggg	cgtgggtactg	ttgctacagg	tcgtgttgaa	cgtggacaag	ttcgcggttg	420
tgacgttgta	gatatcgttg	gtatcgcaga	agaaacagct	caaacaacag	ttactgggtgt	480
tgaaatgttc	cgtaaattat	tagactacgc	tgaagctgga	gacaacattg	gtgctttact	540
acgtgggtgt	gcacgtgaag	acatccaacg	tggacaagtt	ttagctaaac	caggtacaat	600
cacacctcat	acaaaattct	ctgcagaagt	atacgtgttg	acaaaagaag	aaggtggacg	660
tcatactcca	ttcttccacta	actaccgtcc	acaattctac	ttccgtacra	ctgacgtaac	720
aggtgttggt	gaattaccag	aaggaaactga	aatgggttatg	cctggcgaca	acgtaacaat	780
ggaagttgaa	ttaatccacc	caatcgctat	cgaaaacggt	actaaattct	caatc	835

<210> 68
 <211> 835
 <212> DNA
 <213> *Enterococcus mundtii* ATCC 43186

<400> 68						
cggagcaatc	ttagttgttt	ctgctgctga	cggccctatg	cctcaaactc	gtgaacacat	60
cctattatct	cgtaacgttg	gtgtaccata	catcggttga	ttcttgaaca	aagtagatat	120
ggttgatgac	gaagaattac	ttgaattagt	tgaatggaa	gttcgtgacc	tattaacaga	180
atacgaattc	cctgggtgacg	atgttcctgt	aatcgctggg	tcagctttaa	gagctttaga	240
aggcgacgct	kcatacgaag	aaaaaatctt	tgaattgatg	gctgcagttg	acgaatatat	300
cccaactcca	gaacgtgata	acgacaaacc	attcatgatg	ccagttgagg	acgtattctc	360
aatcactggg	cgtgggtactg	ttgctacagg	acgtgttgaa	cgtggacaag	ytctgtgttg	420
tgacgttatc	gatatcgttg	gtatcgcaga	agaaacagct	caaacaactg	taactgggtgt	480
tgaaatgttc	cgtaaattat	tagactacgc	tgaagcaggc	gataacattg	gtgcgttact	540
acgtgggtgt	tcacgtgaag	acatccaacg	tgggtcaagt	ttagctaaac	caggtacaat	600
cacacctcat	acaaaattct	ctgcagaagt	atacgtgttg	actaaagaag	aaggtggacg	660
tcatactcca	ttcttccacta	actaccgtcc	acaattctac	ttcygtacga	ctgacgtaac	720
trgtgttgty	gaattaccag	aaggaaactga	aatgggttatg	cctggcgaca	acgtaacaat	780
ggaagttgaa	ttaatccacc	caatcgctat	cgaaaatggt	actaaattct	caatc	835

<210> 69
 <211> 836
 <212> DNA
 <213> *Enterococcus pseudoavium* ATCC 49372

<400> 69						
cggagctatc	ttagtagtat	ctgctgctga	tggccctatg	cctcaaacac	gtgaacacat	60
cttggtatct	cgtaacgttg	gtgttcctta	catcggttga	ttcttaaaca	aaatggatat	120
ggttgatgac	gaagaattac	tagaattagt	tgaatggaa	gttcgtgact	tattgtcaga	180
atacgatttc	ccaggcgacg	acactcyagt	tatcgctggg	tcagcyttga	aagctttaga	240
aggcgaccct	tcatacraag	aaaaaatctt	agaattaatg	stgctgttg	acgaatacat	300
cccaacacca	gttcgtgata	ctgacaaacc	attcatgatg	ccagtcgaag	acgtattctc	360
aatcactggg	cgtgggtactg	ttgcaactgg	tcgtgttgaa	cgtggacaag	ttcgcggttg	420
tgacgaagtt	gaaatcgtag	gtatcgctga	agaaactgct	aaaacaactg	ttacaggtgt	480
tgaaatgttc	cgtaaattgt	tagactacgc	tgaagcaggc	gataacatcg	gtgcattatt	540
acgtgggtgt	gcacgtgaag	acatccaacg	tggacaagta	ttggctaaac	cagcttcaat	600
cactccacat	acaaaattct	ctgcagaagt	ttacgtttta	actaaagaag	aaggcgggcg	660
tcacactccg	ttcttccacta	actaccgtcc	tcagttctac	ttccgtacaa	ctgacgtaac	720
tggtgttggt	gatctaccag	aaggtactga	aatggtaatg	cctggtgata	acgtaactat	780
ggaagttgaa	ttaatccacc	caatcgcgat	cgaagacgga	actcgtttct	ctattc	836

<210> 70
 <211> 835
 <212> DNA
 <213> *Enterococcus raffinosus* ATCC 49427

<400> 70						
cggagctrct	ttagtagtat	ctgctgctga	tggccctatg	cctcaaactc	gtgaacacat	60
cttggtatct	cgtaacgttg	gtgttcctta	catcggttga	ttcttaaaca	aaatggatat	120
ggttgacgat	gaagaattac	tagaattagt	tgaatggaa	gttcgtgact	tattaactga	180
atacgacttc	ccaggcgacg	acactccagt	tatcgcgagg	tcagctttga	aagccttaga	240

aggcgacgct	tcatacgaag	aaaaaatctt	agaattaatg	gctgctgttg	atgaatacat	300
cccaacacca	gttcgtgata	ctgacaaacc	attcatgatg	ccagygggaag	acgtaytctc	360
aatcactggt	cgtggaactg	ttgcaactgg	tcgtgttgaa	cgtggacaag	ttcgcgttgg	420
tgacgaagtt	gaaatcgtag	gtattgctga	agaaactgct	aaaacaactg	ttacaggtgt	480
tgaaatgttc	cgtaaattgt	tggattacgc	tgaagcgggc	gacaacattg	gtgcattatt	540
acgtggtggt	gcacgtgaag	acatccaacg	tggacaagta	ttggctaaac	cagcttcaat	600
cactccacat	acaaaattct	ctgcagaagt	ttacgtttta	actaaagaag	aaggcggacg	660
tcatactcca	ttcttcacta	actaccgtcc	tcagttctac	ttccgtacaa	ctgacgtaac	720
tggtgtagtt	gatctaccag	aaggctactga	aatggtaatg	cctggtgata	acgtaactat	780
ggaagttgaa	ttaatccacc	caatcgcgat	cgaagacgga	actcgtttct	ctatt	835

<210> 71
<211> 835
<212> DNA
<213> *Enterococcus saccharolyticus* ATCC 43076

<400> 71						
cggcgcgatc	ttagtagtat	ctgctgctga	tggtcctatg	cctcaaactc	gtgaacacat	60
cttgttatct	cgtaacgtag	gtgttcctta	catcgttgta	ttcttaaaca	aaatggatat	120
ggttgatgac	gaagaattat	tagaattagt	agaaatggaa	gttcgtgact	tattatcaga	180
atacgatttc	ccaggcgatg	acactccagt	tattgcaggt	tctgctttga	aagctttaga	240
aggcgatcca	gtttacgaag	aaaaaatctt	cgaattaatg	gctgcagttg	acgaatatat	300
cccaactcca	gaacgtgata	ctgaaaaacc	attcatgatg	ccagttgagg	atgtattctc	360
aatcactggt	cgtggtagtg	ttgctacagg	tcgtgttgaa	cgtggacaag	ttcgcgttgg	420
tgacgttgta	gaaatcggtg	gtatcgacga	agaaacagct	caaactactg	taacaggtgt	480
tgaaatgttc	cgtaaatatt	tagactacgc	tgaagcaggc	gataacatcg	gtgctttatt	540
acgtgggggt	gctcgtgaag	acatccaacg	tggacaagta	ttagctaaac	caggaacaat	600
cactcctcat	acaaaattcg	tagctgaagt	ttacgtttta	actaaagaag	aagggtggacg	660
tcatactcca	ttcttcacta	actaccgtcc	tcaattctac	ttccgtacaa	ctgacgtaac	720
tggtgttgta	gaattacgcg	aaggctactga	aatggtaatg	cctggtgaca	acgtaactat	780
cgacgttgaa	ttaatccacc	caatcgctat	cgaagacgga	actcgtttct	ctatt	835

<210> 72
<211> 823
<212> DNA
<213> *Enterococcus solitarius* ATCC 49428

<400> 72						
gagctatctt	ggtagtttct	gcagctgatg	gccccaatgcc	acaaactcgt	gaacatatatt	60
tgttgtcacg	taatgtagg	gtaccttaca	tcgttggtgt	cttgaacaaa	atgggatattg	120
ttgatgacga	agaattactt	gagtttagttg	aaatggaagt	acgtgatcta	ttatctgaat	180
acgacttccc	aggagatgat	actccagttt	tttccggttc	agctttgaaa	gctttagaag	240
gcgacgaaga	atatgaacaa	aaaattatgg	acttaatgga	tgacgttgat	gactacattc	300
caactcctga	acgtgaccat	gacaaacat	tcatgatgcc	aattgaagat	gtattttcaa	360
ttacaggccg	tggtactggt	gctacaggac	gtgttgaaacg	cgggactatc	aaagtcggcg	420
atgaagttga	cattattggt	attcatgaag	acgttaaaaa	gacaacagtt	actggtgtag	480
aaatgtttccg	taaattggtg	gactacgctg	aagcaggcga	taacattggt	actttgttac	540
gtggtgtttc	tcgtgatgat	atcgaacgtg	gtcaagtatt	agctaaacca	ggttcaatca	600
caccacatac	aagattctct	gctgaagttt	atgttttgac	taaagaagaa	ggcggacgtc	660
atactccatt	cttctcaaac	tatcgtcttc	aattctactt	ccgtacaact	gatatcactg	720
gtgtcattga	attgccagaa	ggtactgaaa	tggtaatgcc	aggtgataat	gtaacaatgg	780
atgttgaatt	aatccaccca	gtcgtctatcg	aagaaggaaac	tcg		823

<210> 73
<211> 835
<212> DNA
<213> *Enterococcus casseliflavus* ATCC 25788

<400> 73						
cggtgcaatc	ttggctcgtat	cagcgacaga	tggcccaatg	ccacaaacac	gggagcatat	60
tttgctttct	cgtcaagtgg	gtgtgaaaca	tttgatcgtc	tttttgaata	agacggacct	120
tgctgatgat	gacgagttga	tcgatttagt	tgaatggaa	gtcagagaat	tgctgactga	180
atatgatatt	cctggcgacg	acattcctgt	gatcaagggc	tctgcgttaa	aagccttggg	240

```

agggggaccca gatgctgaag cagcgatctt aacgctgatg gatacagtag atgaatatat 300
cccaacgcca gaacgtgata ctgacaaacc attggttgta ccgatcgaag atgtcttttc 360
gatcacagga cgggggaccg ttgcttcttg tcggatcgat cgcggcacgg taaaagtcgg 420
ggatgaagta gaaatcgtcg gaatcaaacc tgaacacaa aaagcagtcg tgacaggggt 480
agaaatgttc cgcaaaacga tggacttcgg agaagctggc gataacgtag gggatttggt 540
acggggcatc acccgtgatg aaattgaacg tggccaagtg ttagcaaaac caggttctat 600
cacaccgcat acgaaattcc aagcggaagt ctatgtgttg acaaaagaag aaggcggtcg 660
ccatacccca ttctttaata attatcgccc acaattttac ttccgtacaa cggacgtaac 720
tgggaaatc gttttaccag aaggaacgga aatgggtgat cctggtgaca acgtaacgat 780
cgatgtggaa ttgatccatc cgatcgctgt agaaaatgga acgaccttct cgatt 835

```

<210> 74

<211> 380

<212> DNA

<213> *Staphylococcus saprophyticus* ATCC 15305

<400> 74

```

taacggggcgt ctcgatagaa aaacacgtga aaatcccaat gattataaac aatcaatata 60
cgatttttgct gaagctgttaa caaaagggtat taaggaaaca acaataaaaa attaataggg 120
aacttaacca gaatcggttaa aactatatga agattctggt tttttaaat caaaaagttt 180
tctaaaaaat ttacttgctt ttttaagtat aggtataaaa tacgattgat taaaacagta 240
aaggaaatga atcatgaaac aattaactaa gcctttatac ttttacctat tactttttat 300
tacaacaacg ctgattggcg cgttactatt atatttgcca atcacaggta aacatcctat 360
tgattttgtg gacgcccgtt

```

<210> 75

<211> 666

<212> DNA

<213> *Enterococcus flavescens* ATCC 49996

<400> 75

```

gcaatcttgg tcgtatcagc gacagatggc ccaatgccac aaacacggga gcatattttg 60
ctttctcgtc aagtgggtgt gaaacatttg atcgtctttt tgaataagac ggacctgtgc 120
gatgatgacg agttgatcga ttagttgaa atggaagtc gagaattgct gactgaatat 180
gattttcctg gcgacgacat tcctgtgatc aagggtctcg cgtaaaagc cttggaaggg 240
gaccagatg ctgaagcagc gatcttaacg ctgatggata cggtagatga atatatccca 300
acgccagaac gtgatactga caaacatttg ttgttaccga tcgaagatgt cttttcgatc 360
acaggacggg ggaccgttgc ttctggtcgg atcgatcgcg gcatggtaaa agtcggggat 420
gaagtataaa tcgtcggaat caaacctgaa acacaaaaag cagtcgtgac aggggtagaa 480
atgttccgca aaacgatgga cttcggagaa gctggcgata acgtaggggt attgttacgg 540
ggcatcaccg gtgatgaaat tgaacgtggc caagtgttag caaaaccagg ttctatcaca 600
ccgcatacga aattccaagc ggaagtctat gtgttgacaa aagaagaagg cggtcgccat 660
acccca

```

<210> 76

<211> 751

<212> DNA

<213> *Enterococcus gallinarum* ATCC 49573

<400> 76

```

tggtgcgatt ttagttgtat ccgcaacaga tgggtccaat cctcaaacc gggaacatat 60
cttgctttcg agacaagttg gtgtgaaaca tctgattgtt ttcttgaaca aaatcgattt 120
agtcgatgac gaagaattga ttgatttagt agaaatggaa gtaagagaac tgctatctga 180
atataatttt ccaggggatg acattcctgt tatcaaagg tccggcattaa aagcgttgga 240
aggagaccct gatgcagaag ctgccatcat ggaattaatg gatacagtag acagctatat 300
cccaacacct gagcgtgata cagacaaacc attactcttg ccagttgaag atgtcttttc 360
gattactgga cgaggaacag ttgcttcagg accgatcgat cgggggaacag ttcgggtagg 420
cgatgaagta gaaatcgtcg gtatcaaacc tgaaccccaa aaagctgtag tgacaggcgt 480
cgaaatgttc cgcaagacga tggacttttg ggaagccgg gacaatgtag gtgtcttgct 540
gagaggggatc actcgtgacg aaattgaacg aggacaagt ttggctaaac caggttcgat 600
cacaccacat acaaaattcc aagcagaagt ttatgtatt acgaaagaag aaggtggtcg 660
tcatacacca ttcttcaaca actatcgcc acaattttat ttccgtacaa cggatgtgac 720
agggaaacatt acattgcctg aaggaacaga a

```

<210> 77
 <211> 834
 <212> DNA
 <213> *Ehrlichia canis* strain Florida

<400> 77
 tgcagcaata ttagtagtgt ctgcaactga tggagcaatg ccacaaacaa gagaacatat 60
 attattagca aagcaagtag gtgtaaaaga tatagtagtg tggatgaata agtgtgatgt 120
 tgtagatgat gaagaaatgt tgtcattagt tgaaatggaa ataagggaat tgttatcaaa 180
 atatgggtat cctgggggatg atatatagatg agttagagga tctgcagtta aagcattaga 240
 agaagaaaca ggctcaggtg tgtggagtga aaaaataatg gaattgatga atgctttaga 300
 aaaaataagt ttaccagtaa gagaaaaaga taagccattt ttaatgtcaa tagaagatgt 360
 gttttcaata cctggaagag gtacagtagt aacaggaaga atagaaagag gagtaattag 420
 agtaggggat aaaatagaga tagtaggatt gcgtgagata caaagtacag tatgtacagg 480
 tgttgaaatg tttcataaag cattagatgc aggagaagca ggggataatg ctggaatatt 540
 gttaagaggg ataaaaaaag aagatgtaga aagagggcaa gtattgagtg cacctggaca 600
 gatacattca tataagagat ttaaggcaga ggtatatata ttgaaaaaag aagaaggagg 660
 aagacatact ccatttttct caaattacca gccgcaattt tatgttagaa caacagatgt 720
 aacagggaat ataaagttac cagaaggagt agaaatggta atgccagggg ataataataa 780
 tatcgaagtg agtttggata agcctgttgc tattgatcaa ggattgagat ttgc 834

<210> 78
 <211> 817
 <212> DNA
 <213> *Escherichia coli* ATCC 23511

<400> 78
 cggcgcgatg ctggtagttg ctgcgactga cggccccgatg ccgcagactc gtgagcacat 60
 cctgctgggt cgtcaggtag gcgttccgta catcatcgtg ttcctgaaca aatgcgacat 120
 gggttgatgac gaagagctgc tggaaactggt tgaaatggaa gttcgtgaac ttctgtctca 180
 gtacgacttc ccgggcgacg acactccgat cgttcgtggt tctgctctga aagcgctgga 240
 aggcgacgca gagtgggaag cgaaaatcct ggaactggct ggcttccctgg attcttayat 300
 tccggaacca gagcgtgcga ttgacaagcc gtccctgctg ccgatcgaag acgtattctc 360
 catctccggt cgtgggtaccg ttgttaccgg tctgttagaa cgcgggtatca tcaaagttgg 420
 tgaagaagtt gaaatcgttg gtatcaaaga gactcagaag tctacctgta ctggcgttga 480
 aatgttccgc aaactgctgg acgaaggccg tgctgggtgag aacgtagggtg ttctgctgcg 540
 tggatatcaa cgtgaagaaa tcgaacgtgg tcagggtactg gctaagccgg gcaccatcaa 600
 gccgcacacc aagttcgaat ctgaagtgtta cattctgtcc aaagatgaag gcggccgtca 660
 tactccgttc ttcaaaggct accgtccgca gttctacttc cgtactactg acgtgactgg 720
 taccatcgaa ctgccggaag gcgtagagat ggtaatgccg ggcgacaaca tcaaaatggt 780
 tgttaccctg atccaccgca tcgcgatgga cgacggt 817

<210> 79
 <211> 825
 <212> DNA
 <213> *Escherichia fergusonii* ATCC 35469

<400> 79
 cgatcctggt agttgctgcg actgacggcc cgatgccgca gactcgtgag cacatcctgc 60
 tgggtcgtca ggtagggcgtt ccgtacatca tctgtttcct gaacaagtgc gacatgggtg 120
 atgacgaaga gctgctggaa ctgggttgaaa tggaaagttcg tgaacttctg tctcagtagc 180
 acttcccggg cgacgacact ccgatcgttc tgggttctgc tctgaaagcg ctggaaggcg 240
 acgcagagtg ggaagcgaaa atcctggaac tggctggctt cctggattct tacattccgg 300
 aaccagagcg tgcgattgac aagccgttcc tgctgccgat cgaagacgtg ttctccatct 360
 ccggtcgtgg taccgttgtt accggtcgtg tagaacgcgg tatcatcaaa gttggtgaag 420
 aagttgaaat cgttggatc aaagagactc agaagtctac ctgtactggc gttgaaatgt 480
 tccgcaaaact gctggacgaa ggccgtgctg gtgagaacgt aggtgttctg ctgctgggta 540
 tcaaactgta agaaatcgaa cgtgggtcagg tactggctaa gccgggcacc atcaagccgc 600
 acaccaagtt cgaatctgaa gtgtacattc tgtccaaaga tgaaggcggc cgtcactctc 660
 cgttcttcaa aggtaccgt ccgcagttct acttccgtac tactgacgtg actggtacca 720
 tcgaactgcc ggaaggcgta gagatggtaa tgccgggcga caacatcaaa atgggttgta 780
 ccctgatcca cccgatcgcg atggacgacg gtctgcgttt cgcaa 825

<210> 80
 <211> 829
 <212> DNA
 <213> Escherichia hermannii ATCC 33650

```

<400> 80
ggcgcgatcc tgggttgttg tgcgactgac ggcccgatgc cgcagacccg tgagcacatc 60
ctgctggggtc gtcaggtagg cgttccgtac atcatcggtt tcctgaacaa atgcgacatg 120
gttgatgacg aagagctgct ggaactgggt gagatggaag ttccggaact gctgtcccag 180
tacgatttcc cgggcgacga caccgccgat gttcgtgggt ccgcgctgaa agcgctggaa 240
ggcgaagcag agtgggaaga gaaaatcatc gaactggctg gctacctgga ttctatatac 300
ccggaaccag agcgtgcatg tgacaagccg ttctgctgc ctatcgaaga cgtattctcc 360
atctccggcc gtggtaccgt tgttaccggt cgtgtagagc gcggtatcat caaagtgggt 420
gaagaagttg aaatcgtggg tatcaaagat actgcgaaat caacctgtac cggcgttgaa 480
atgttccgca aactgctgga cgaaggccgt gcgggcgaga acgtgggtgt tctgctgcgt 540
ggtatcaaac gtgaagaaat cgaacgtggg cagggtactgg ctaagccggg ttccatcaag 600
cckcacacca agttcgaatc tgaagtgtac attctgtcca aagacgaagg cggccgtcac 660
actccgttct tcaaaggcta ccgtccgcag ttctacttcc gtacaactga cgtgactggc 720
accatcgaac tgccggaagg cgttgagatg gtaatgccgg gcgacaacat caaaatgggt 780
gttaccctga tccaccgat cgcgatggac gacggtctgc gtttcgcaa 829
    
```

<210> 81
 <211> 816
 <212> DNA
 <213> Escherichia vulneris ATCC 33821

```

<400> 81
cggcgcgatc ctggttgttg ctgcgactga cggcccgatg ccgcagaccc gtgagcacat 60
cctgctgggt cgtcaggtag gcggtccgta catcatcggt ttctgaaca aatgcgacat 120
ggttgatgac gaagagctgc tggaactggg tgagatggaa gtgctgaac ttctgtcca 180
gtacgacttc cggggcgacg acaccccgat ctatcggtgt tctgcgtgaa aagcgctgga 240
aggcgaagct gagtgggaag agaaaatcgt tgagctgggt ggctacctgg attcctacat 300
cccggaaacca gagcgtgcga ttgacaagcc gttcctgctg ccgatcgaag acgtattctc 360
catctccggt cgtggtagcc ttgttaccgg tcgtgtagag cgcggtatca tcaargtkgg 420
tgaagaagtt gaaatcgtgg gtatcaaaga tactgcgaaa tctacctgta ccggcgttga 480
aatgttccgc aaactgctgg acgaaggctc tgcaggcgag aactgcggcg ttctgctgcg 540
tggtatcaag cgtgaagaga tccagcgtgg ccagggtctg gctaagccgg gctcaatcaa 600
gccgcacacc aagttcgaat ccgaagtgtg catcctgtcc aaagacgaag gcggccgtca 660
cactccgttc ttcaaagget accgtccgca gttctacttc cgtacaactg acgtgactgg 720
caccatcgaa ctgccggaag gcgtagagat ggtaatgccg ggcgacaaca tcaaaatggg 780
tggtaccctg atccatccga tcgcgatgga cgacgg 816
    
```

<210> 82
 <211> 828
 <212> DNA
 <213> Eubacterium lentum ATCC 43055

```

<400> 82
cggcgccctcc tcgttatcgc cgccaccgac ggcccgatgg ccagacccg cgagcacatc 60
ctgctcgccc gtcaggctcg cggtgccctac atcggtggtt tcctgaacaa gtgcgacatg 120
gtcgacgacg aggagctcct cgagctcgct gagatggaag ttccgagact gctcgactct 180
tacgagttcc cgggcgacga caccgccgat atccgcgggt ccgctttgaa ggccctcgag 240
ggcgacaaaag agtggcagga gaaggtctgg gagctcatgg acgcccgtcg ctcctacatc 300
ccgacgcccgg agcgcattgg cgacaagccg ttctgatgg ccgtcgagga cacgatgacc 360
atcaccggcc gcggcaccgt tgccaccggt cgtgtggagc gtggtagcgt gcatgtcaac 420
gacccgctgg agatcgtcgg tatcaaggag acccagaaca cgggtctgcac cggtatcgag 480
atgttccgca agctgctcga cgaggctcag gccggcgaca acatcggtg cctgctccgc 540
ggtgtcaagg gcgaggagat cggtccggcg caggttctct gcaagcccgg tagcgtgacc 600
ccgcacaccg agttcgaggg tcaggtctac atcctgacga aggaagaggg cggccgccac 660
acgcccgttct tcgacggcta ccgtccgcag ttctacttcc gcacgacgga cgtgacgggt 720
gttgcccacc ttcccagggg caccgagatg gtcattgccg gcgacaacgt ggagatcaag 780
ggcgagctca ttcaccgat cgccaggaag agggctgctg tcgctaac 828
    
```

<210> 83
<211> 835
<212> DNA
<213> *Eubacterium nodatum* ATCC 33099

<400> 83
ggagcaattc tggtttgtgc agcaackgac ggaccaatgc ctcagacaag agaacatata 60
cttttgtcaa ggcaggtagg agtgccatat atcatcgat tcctgaataa atgtgacatg 120
gtggatgayg aagagcttct ggacttggtg gagatggaag taagagaact tctcagttag 180
tatgaattcc cgggagatga taccctgata gtaagagggt cagccctgaa ggcactggaa 240
gaacccaatg gagaatgggc agacaagatt gtagagctga tggaggaagt agataaatac 300
attcctgaac caaagagaga taacgacaaa ccgttcctga tgcctgtaga ggacgtattc 360
tcaataacag gaagaggaaac agtagcgaca ggaagrgttg aaagaggaat cctgaagggtc 420
ggtgatgaag tagaaatcgt gggaatgagc gaagagagaa gaaaggtagt agtaacggga 480
gttgaaatgt tcagaaagct tctggatgaa gcagagacag gagacaacat cggagcactg 540
ctgagaggag ttcagagaac rgagatccag agagggtcagg tattggcrgc acctggaacg 600
atcaaccac atacaaagt caagggtcag gtatatgtac tgaagaagga agaaggagga 660
aggcatacgc cgttcttcaa yggatacagw ccacagttct acttcagaac aacagacgta 720
acaggagatt tgcagctgcc ggaaggarga gagatgtgca tgccgggaga taatgtggta 780
atgaacrtca gcctgatcac tccgattgct atagaagagg gwctgagatt tgcca 835

<210> 84
<211> 826
<212> DNA
<213> *Ewingella americana* ATCC 33852

<400> 84
gcatcctg tttgttgcgc aactgatggc cctatgccac agactcgtga gcacatcctg 60
ttgggtcgyc aggttggcgt tccattcatg atcgtattca tgaacaaatg cgacatgggt 120
gatgacgaag agctgctgga actggtagaa atggaagttc gygaacttct gtctgcttac 180
gatttcccag gcgacgacat cccagttgtt aaaggttcag cgctgaaagc actggaaggc 240
gaagcagagt gggaagctaa gatcatcgag ctggctggcc acctggatag ctacatccca 300
gaaccagagc gtgcgattga caagccattc ctgctgccaa tcgaagacgt attctccatc 360
tccggctcgtg gtaccgttgt taccggctcgt gtagagcgcg gtatcatcaa agttggcgaa 420
gaagttgaaa tcgttggtat caaggacact gttaagtcta cttgtactgg cgttgaaatg 480
ttccgcaaac tgctggacga aggccgtgcy ggtgagaacg ttggtgttct gctgcgtgg 540
atcaagcgtg aagacatcga acgtggctcag gttctggcta aaccagggtc aatcaaacca 600
cacaccacwt tygactcaga agtttatatc ctgagcaaaag atgaaggcgg ccgtcatact 660
ccgttcttca aaggctaccg tccacagttc tacttccgta caactgacgt gaccggtagc 720
atcgaactgc cagaaggcgt agagatggta atgccagggt acaacatcaa catgrtagtt 780
accctgatcc acccaatcgc gatggatgac ggtctgcgtt tcgcaa 826

<210> 85
<211> 828
<212> DNA
<213> *Francisella tularensis* strain LVS

<400> 85
tgggtgctatt ctagtatgtt ctgctgcgga tggctcctatg ccacaaactc gtgagcacat 60
tctgctttct cgtcaagttg gtgtacaaaa aatcgtttgt ttcttaaaca agtgtgacat 120
ggttgatgat gaagagttat tagagctagt tgagatggaa gtctgtgagc ttttagatca 180
gtatgagttc ccagggtgat acactccagt tattatgggt tcagctctta gagctattga 240
aggtgacgaa gcttacgttg agaaaattgt tgagctagtt caagctatgg atgactatat 300
tctgtctcct gagcgtgata ctgagaagcc atttattctt ccgatcgaag atgtattctc 360
aatttcagggt cgtgggtactg ttgtaactgg tctgtattgag cgcggtgtag ttaacgttgg 420
tgatgaagtt gaagttgttg gtattcgtcc aactcaaaaa actacagtaa ttggtgtgga 480
aatgttccgt aagcttttag atagagggga agctgggtgat aacgttggtg tcctagttcg 540
tggacttaag agagatgatg ttgagcgtgg acaagtatta tgtaagccag gttcaattaa 600
gccacatact aagtttgaag ctgagggttta tgtattatct aaagaagagg gtggtagaca 660
tactccattc ttcaagggat atagaccaca attctacttc cgtactacag acattactgg 720
agctgttgag cttccagagg gtgtagaaat ggttatgcct ggtgataacg ttaagatgac 780
tatcactcta attaacccaa tcgctaggat gaagggttac gttttgca 828

<210> 86
<211> 829
<212> DNA
<213> *Fusobacterium nucleatum* subsp. *polymorphum* ATCC 10953

<220>
<221> misc_feature
<222> (274)..(274)
<223> n represents any nucleotide

<400> 86
cgggtgctatc atcgtagktg ctgctactga tgggccgatg cctcaractc gtgagcayat 60
cytgctggct cgtcaggtaa acgtwckag actggttgta ttcataaaca agtgygacat 120
ggtagacgac gctgaaatgy tggaaactcg tgaatggaa atgcgtgaac tgctttcagc 180
ytacgaattc gayggygaca acactccktt cattcagggt tctgctcttg gtgcrttgaa 240
yggcgttgaa aagtgggaag agaagggtat ggancgtgat gatgcttgcg acacttggat 300
tcctttgcct ccgcgtgata ttgayaaaacc gttcttgatg ccggttgaag acgtattctc 360
aatcactggt cgtggtactg tagctactgg tctgtatcga gctggtgtta tccatgtagg 420
tgacgaagtt gaaatcctcg gtttgggtga agacaagaag tctgttgtaa ctggtgttga 480
aatgttccgc aagttgctgg atcaagggtga agctggtgac aacgtaggty tgttgcctcg 540
tggtatcgac aagaacgaaa tcaaactggt tatggttctt tgtaagcccg gtcagattaa 600
acctcactct aagttcaaag cttctatcta cgttttgaag aaagaagaag gtggctcgta 660
cactccgttc cacaacaaat accgtcctca gttctatctg cgtactatgg actgtacagg 720
tgaaatcwct cttccggaag gaactgaaat ggtaatgcct ggtgataacg tagaaatcac 780
tgtagaactg atctaccgga tagcattgaa cgtaggtttg cgtttcgcct 829

<210> 87
<211> 828
<212> DNA
<213> *Gemella haemolysans* ATCC 10379

<400> 87
ctatcttagt aatcgctgct acagatggac caatggctca aactcgtgag cacatcctat 60
tatctcgtaa cgttggagta ccaaaaatcg ttgtattctt aaacaaatgt gatatggtg 120
atgacgaaga gttattagaa ttagttgaaa tgggaagttcg tgaactatta tctgaatagc 180
gattcgacgg agatgaacta ccagtaatca aaggttctgc tcttaaagct cttgaaggag 240
atgcagatgc agaaaaagct atcatcgaat taatggaaac agttgacgaa tacatcccaa 300
ctccagaacg tgataacgct aaaccattca tgatgccagt tgaggacgta ttctcaatca 360
caggtcgtgg tacagttgct actggacgtg ttgaacgtgg acaagttaaa gttggagacg 420
tagtagaaat cgttggatta actgaagaac cagcttcaac tactgtaaca ggtgttgaaa 480
tgttccgtaa attattagat tacgctgaag caggagataa catcggtgca ttattacgtg 540
gtgttgctcg tgaagacatc gaacgtggac aagtttttagc agtccctaaa acaatcactc 600
cacacactca attcgtagct gacgtgtacg tattatctaa agaagaagggt ggacgtcaca 660
ctccattctt cacaactac cgtcctcaat tctacttccg tactactgac gtaactggtg 720
tagttacttt accagaagggt actgaaatgg taatgcctgg ggataacgta tcaatcaacg 780
tagaacttat ttctccaatc gcgatcgaag aaggaactcg tttctcaa 828

<210> 88
<211> 823
<212> DNA
<213> *Gemella morbillorum* ATCC 27824

<400> 88
tcttagtaat cgctgctaca gatggtccta tggctcaaac tcgtgaacac atcctattat 60
ctcgtaacgt tggagtacct aaaattggtt tattcttaaa caaatgtgat atggttgatg 120
acgaagagtt attagaatta gtagaaatgg aagttcgtga actattatct gaatacggat 180
ttgatggaga tgaactacca gtaatcaaag gttcagctct taaagctctt gaaggagatg 240
cagatgctga aaaagctatc atcgaattaa ttgaaacagt tgacgagtac atcccaactc 300
cagaacgtga taacgctaaa ccatttatga tgccagttga ggacgtgttc tcaatcacag 360
gtcgtggtac agttgctact ggacgtgttg aacgtggaca agttaaaagt ggtgacgtag 420
tagaaatcgt tggattaact gaagaaccag cttcaactac tgtaacaggt gttgaaatgt 480
tccgtaaatt attagattac gctgaagcag gagataacat cgggtgcatta ttacgtggtg 540
ttgctcgtga agatatcgaa cgtggacaag ttttagcagc tcctaaaaca atcactccac 600
atactcaatt cgtagctgat gtgtacgtat tatctaaaga agaaggtgga cgtcacactc 660

cattcttcac	aaactaccgt	ccacaattct	acttccgtac	tactgacgta	actggtgtag	720
ttactttacc	agaaggtagt	gaaatggtaa	tgccctggga	caacgtatca	atcaacgtag	780
aacttatttc	tccaatcgct	atcgaagaag	gaactcgttt	ctc		823

<210> 89
 <211> 829
 <212> DNA
 <213> Haemophilus actinomycetemcomitans ATCC 33384

<400> 89						
gctatcttag	tagtagcagc	aaccgacggt	cctatgccac	aaactcgtga	gcacatctta	60
ttaggtcgcc	aagtaggtgt	tccttacatc	atcgtattct	taaacaaatg	cgacatggta	120
gatgacgaag	agttattaga	attagttgaa	atggaagttc	gtgaacttct	ttctcaatat	180
gacttcccgg	gcgatgacac	cccaatcgta	cgcggttctg	cattaaaagc	gcttgaaggc	240
gatgccgcat	gggaagaaaa	aatccttgaa	ttagcaaaacc	atttagatac	ttacatcccg	300
gaacctgagc	gtgctatcga	ccaaccgttc	cttcttccaa	ttgaagatgt	gttctctatc	360
tccgggtcgtg	gtaccgtagt	aacgggtcgt	gttgagcgcg	gtatcatccg	taccgggtgat	420
gaagttgaaa	tcgtgggtat	caaaccgact	gcaaaaacca	ccgtaaccgg	tggtgaaatg	480
ttccgtaaat	tacttgacga	aggctcgtgcg	ggtgaaaaca	tcggtgcatt	attgctgggt	540
actaaacgtg	aagaaatcga	acgtgggtcag	gtattggcga	aaccggggtc	aatcaccgcc	600
cacactgact	tcgaatctga	agtgtacgta	ttgtccaaag	aagaagggtg	tcgtcatact	660
ccattcttca	aaggttaccg	tcacacaattc	tatttccgta	caactgacgt	aaccgggtact	720
atcgagttac	ctgaaggcgt	ggaaatgggt	atgcctggcg	ataacatcaa	aatgaccgta	780
tccttaattc	acccaattgc	gatggaccaaa	ggtttacgtt	tcgctatcg		829

<210> 90
 <211> 833
 <212> DNA
 <213> Haemophilus aphrophilus ATCC 33389

<400> 90						
tggtgctatc	ttagtagtag	cagcaactga	tggtcctatg	ccacaaactc	gtgagcacat	60
cttattaggt	cgccaagtag	gtgttcctta	catcatcgta	ttcttaaaca	aatgcgacat	120
ggtagatgac	gaagagttat	tagaattagt	tgaaatggaa	gttcgtgaac	ttctttctca	180
atatgacttc	ccgggtgatg	atacaccaat	cgtacgtggt	tctgcattac	aagcggttaa	240
cgcgcttgca	gaatgggaag	aaaaaatcct	tgaattagca	aaccacttag	atacttacat	300
tcctgagcca	caacgtgcta	tcgaccaacc	gttccttctt	ccaattgaag	acgtgttctc	360
tatctccggt	cgtggtactg	tagtaacagg	tcgtgttgag	cgtggtatca	tccgtaccgg	420
tgatgaagtt	gaaatcgtag	gtatcaaacc	gactgcgaaa	actaccgtaa	ccggtggtga	480
aatgttcctg	aaattacttg	acgaaggctc	tgcaggtgaa	aacatcgggt	cattattacg	540
tgggactaaa	cgtgaagaaa	tcgaacgtgg	tcaagtattg	gctaaaccgg	gctcaatcac	600
tccgcacact	gatttcgaat	ctgaagtgtg	cgtattatcc	aaagaagaag	gtgggtcgta	660
tactccattc	ttcaaagggt	accgtccaca	attctatttc	cgtacaactg	acgtaaccgg	720
tactatcgag	ttaccggaag	gcgtggaaat	ggttatgcct	ggcgataaca	tcaaaatgac	780
tgtatcctta	atccacccaa	tcgcgatgga	ccaagggtta	cgtttcgcta	tcg	833

<210> 91
 <211> 815
 <212> DNA
 <213> Haemophilus ducreyi DSM 8925

<400> 91						
cgcgctatc	ttagttgtag	cagcaactga	tggtcctatg	cctcaaaactc	gtgaacacat	60
cttattaggt	cgccaagttg	gtgttcctta	catcatcgta	ttcttaaata	aatgcgatat	120
ggtagatgat	gaagaattat	tagaattagt	tgaaatggaa	gttcgtgaac	ttctttctca	180
atatgatttc	ccaggtgacg	atactcctat	cgttcgtggt	tcagcattac	aagcattaaa	240
tggtgtgcct	gagtggaag	aaaaaatcat	tgaattagca	caacacttag	attcttata	300
ccctgagcct	gagcgtgcga	ttgataaaacc	tttcttatta	ccaatcgaag	acgtattctc	360
aatttcaggt	cgtggtacag	tagtaaccgg	tcgtgttgag	cgtggtatca	tcaaatcagg	420
tgaagaagtt	gaaatcgtag	ggattaaaga	aacgacaaaa	acaacagtaa	ccggtggtga	480
gatgttcctg	aaactattag	acgaaggctg	tgcgggtgaa	aacgtagggt	ccttattacg	540
tggtactaaa	cgtgaagaaa	tcgaacgtgg	tcaagtatta	gcgaaaccag	gtacaattac	600
accacacact	gattttgaat	cagaagttta	tgtattatca	aaagaagaag	gtgggtcgta	660

tactccattc	ttcaaaggtt	atcgctcctca	gttctacttc	cgyacaacgg	acgtaacagg	720
aacgattgaa	ttacctgaag	atggttgagat	ggtaatgcct	ggtgataata	tcaagatgac	780
agtaagctta	attcaccccta	tcgcgatgga	cgaag			815

<210> 92
<211> 830
<212> DNA
<213> *Haemophilus haemolyticus* ATCC 33390

<400> 92						
tggtgctatc	ttagtagtag	cagcaactga	tggtccaatg	ccacaaactc	gtgagcacat	60
cttattaggt	cgccaagtag	gtgttcctata	catcatcgta	ttcttaaaca	aatgcgacat	120
ggtagatgac	gaagagttat	tagaattagt	agaaatggaa	gttcgtgaac	ttctttctca	180
atatgacttc	ccaggtgacg	atacaccaat	cgtacgtggt	tctgcattac	aagcattaaa	240
tggcgtagca	gaatgggaag	aaaaaatcct	tgagttagca	aaccacttag	atacttacat	300
cccagaacca	gagcgtgcaa	ttgaccaacc	gttccttctt	ccaatcgaag	atgtgttctc	360
aatctcaggt	cgtggtacag	tagtaactgg	tcgtgtagaa	cgtggtatca	tccgtactgg	420
tgatgaagta	gaaatcgtag	gtatcaaaga	tacagcaaaa	actactgtaa	cgggtgttga	480
aatgttcctg	aaattacttg	acgaaggtcg	tgcaggtgaa	aacatcgggtg	cattattacg	540
tggtagcaaa	cgtgaagaaa	tcgaacgttg	tcaagtatta	gcgaaaccag	gttcaatcac	600
ggcacacact	gacttcgaat	cagaagttta	tgtattatca	aaagaagaag	gtggtcgtca	660
tactccattc	ttcaaaggtt	accgtccaca	attctatttc	cgtacaactg	acgtaactgg	720
tactatcgag	ttaccagaag	gcgtagaaaat	ggtaatgccca	ggcgataaca	tcaagatgac	780
agtaagctta	atccacccaa	tcgcgatgga	ccaaggttta	cgttttcgcaa		830

<210> 93
<211> 824
<212> DNA
<213> *Haemophilus parahaemolyticus* ATCC 10014

<400> 93						
tcttagtagt	agcagcaaca	gacgggtccaa	tgccacaaac	tcgtgagcac	atcttatttag	60
gtcgccaagt	aggtgttcca	tacatcatcg	tattcttaaa	caaatgcat	atgggtgacg	120
atgaagaatt	attagaatta	gttgaaatgg	aagtgcgtga	acttctttca	caatatgact	180
tcccaggtga	tgacacgccca	gtagtacgtg	gttcagcggt	acaagcggtta	aacggcgtag	240
cagagtggga	agaaaaaatt	cttgaattag	caaaccactt	agatacatat	atcccagagc	300
cagagcgtgc	gattgataaa	ccatttcttat	taccaatcga	agacgtattc	tcaatctcag	360
gtcgtggtac	agtagtaaca	ggtcgtgttg	agcgtggtat	catcaaagcg	ggtgaagaag	420
ttgaaatcgt	aggtatcaaa	gacactgcga	aaacaacagt	aactggcgtg	gaaatgttcc	480
gtaaattatt	agacgaaggt	cgtgcgggtg	aaaacgttgg	tgcattatta	cgtggtacaa	540
aacgtgaaga	aatcgaacgt	ggtcaagtgt	tagcgaaacc	aggtacaatt	acaccacaca	600
cagacttcga	atcagaagtg	tacgtattat	caaaagaaga	aggtgggtcgt	cacactccat	660
tcttcaaagg	ttaccgtcca	caattctact	tccgtacaac	tgacgtaact	ggtactattg	720
aattaccaga	aggcgtagaa	atggtaatgc	caggcgataa	catcaaaatg	acagtatcat	780
taatccaccc	aatcgcgatg	gacgaaggtt	tacgttttgc	gatt		824

<210> 94
<211> 833
<212> DNA
<213> *Haemophilus parainfluenzae* ATCC 7901

<400> 94						
tggtgctatc	ttagtagtag	cagcaactga	tggtcctatg	ccacaaactc	gtgagcacat	60
cttattaggt	cgccaagtag	gtgttcctta	catcatcgta	ttcttaaaca	aatgcgacat	120
ggtagatgac	gaagagttat	tagaattagt	tgaatggaa	gttcgtgaac	ttctttctca	180
atatgacttc	ccgggtgacg	atacaccaat	cgtacgtggt	tctgcattac	aagcgttaaa	240
cggcgtwgca	gaatgggaag	aaaaaatcct	tgaattagct	agccacttag	attcttacat	300
tcctgagcct	caacgtgcta	tcgaccaacc	gttccttctt	ccaatcgaag	acgtgttctc	360
tatctccggt	cgtggtacag	tagtaacagg	tcgtgttgag	cgtggtatca	tccgtaccgg	420
tgatgaagtt	gaaatcgtag	gtatcaaacc	gactgcgaaa	actaccgtta	ccggtgttga	480
aatgttcctg	aaattacttg	acgaaggtcg	tgcaggtgaa	aacatcgggtg	cattattacg	540
tggtagyaaa	cgtgaagaaa	tcgaacgtgg	tcaagtattg	gctaaaccgg	gttcaatcac	600
tccacacact	gatttcgaat	ctgaagtgtg	cgtattatcc	aaagaagaag	gtggtcgtca	660

tactccattc	ttcaaaggtt	accgtccaca	attctatttc	cgtacaactg	acgtaaccgg	720
aactatcgaa	ttaccggaag	gcgtggaaat	ggttatgcct	ggcgataaca	tcaaaatgac	780
tgtatcctta	atccacccaa	tcgcgatgga	ccaaggttta	cgtttcgcga	tcg	833

<210> 95
 <211> 824
 <212> DNA
 <213> Haemophilus paraphrophilus ATCC 29241

<400> 95						
tggtgctatc	ttagtagtag	cagcaactga	tggtcctatg	ccacaaactc	gtgagcacat	60
cttattaggt	cgccaagtag	gtgttcctta	catcatcgta	ttcttaaaca	aatgcgacat	120
ggtagatgac	gaagagttat	tagaattagt	tgaatggaa	gttcgtgaac	ttctttctca	180
atatgacttc	ccgggtgacg	atagcccaat	cgtacgtggg	tctgcattac	aagcgttaaa	240
cggtgtgca	gaatgggaag	aaaaaatcct	tgaattagca	aaccacttgg	atacttacat	300
tcctgagcca	caacgtgcta	tcgaccaacc	gttccttctt	ccaatcgaag	acgtgttctc	360
tatctccggg	cgtggtacag	tagtaacagg	tcgtgttgag	cgtggtatca	tccgtaccgg	420
tgatgaagtt	gaaatcgtag	gtatcaaacc	gactgcgaaa	actaccgtaa	ccggtgttga	480
aatgttcctg	aaattacttg	acgaaggtcg	tgcaggtgaa	aacatcggtg	cattattacg	540
tggtacgaaa	cgtgaagaaa	tcgaacgtgg	tcaagtattg	gctaaaccgg	gttcaatcac	600
tcacacacac	gatttcgaat	ctgaagtgtg	cgtattatcc	aaagaagaag	gtggtcgtca	660
tactccattc	ttcaaaggtt	accgtccaca	attctatttc	cgtacaactg	acgtaaccgg	720
tactatcgag	ttaccggaag	gtgtggaaat	ggtaatgcct	ggcgataaca	tcaaaatgac	780
cgtatcctta	atccacccaa	tcgcgatgga	ccaaggttta	cgtt		824

<210> 96
 <211> 818
 <212> DNA
 <213> Haemophilus segnis ATCC 33393

<400> 96						
gctatcttag	tagtagcagc	aactgatggt	cctatgccac	aaactcgtga	gcacatctta	60
ttaggtcgcc	aagtaggtgt	tccttacatc	atcgtattct	taaacaaatg	cgacatggta	120
gatgacgaag	agttattaga	attagttgaa	atggaagttc	gtgaacttct	ttctcaatat	180
gacttcccag	gtgatgatac	tccaatcatt	cgtggttctg	cattacaagc	gttaaaccgg	240
gtagcagaat	gggaagaaaa	aatccttgaa	ttagtcaag	cattagatac	ttacattcct	300
gaacctgagc	gtgcaatcga	ccaaccgttc	cttcttccaa	ttgaagacgt	gttctcaatc	360
tctggtcgtg	gtactgtagt	aacaggtcgt	gtagagcgtg	gtatcatccg	taccggtgat	420
gaagttgtaa	tcgttggtat	caaaccaact	gcgaaaacaa	ccgtaaccgg	tgttgaaatg	480
ttccgtaaat	tacttgacga	aggtcgtgca	ggtgaaaaca	tcggtgcatt	attacgtggg	540
actaaacgtg	aagaaatcga	acgtggtcaa	gtattagcga	aaccgggttc	aatcactcca	600
cacactgact	tcgaatctga	agtgtacgta	ttatctaaag	aagaaggtgg	tcgtcatact	660
ccattcttca	aaggttaccg	tccacaattc	tatttccgta	caactgacgt	aaccggtact	720
atcgagttac	cggaaggcgt	ggaaatgggt	atgcctggcg	ataacatcaa	aatgaccgta	780
tccttaatcc	accaatcgc	gatggaccaa	ggtttacg			818

<210> 97
 <211> 763
 <212> DNA
 <213> Hafnia alvei ATCC 13337

<400> 97						
cggcgctatc	ctggttggtg	ctgcgactga	cggccctatg	cctcagactc	gtgagcacat	60
cctgctgggt	cgtcagggtg	gcgttccttw	catcatcgtr	ttcctgaaca	aatgcgacat	120
ggttgatgat	gaagagctgc	tggaactggg	agaaatggaa	gttcgtgaac	ttctgtctca	180
gtacgacttc	ccwgggagtg	atactccaat	catccgtggg	tctgctctga	aagcgctgga	240
aggygmacct	gagtggaag	ctaagatcgt	agaactggct	gaaactctgg	attcttacat	300
yccacarcca	gaacgtgcta	tcgayaagcc	attcctgctg	ccaatcgaag	acgtattctc	360
tatctctggc	cgtggtacwg	ttgttaccgg	tcgtgtagag	cgcggtatcg	ttaaagtgtg	420
tgaagaagtt	garatcgttg	gtatcaaaga	taccgttaaa	tcaacttgta	ccggcggtga	480
aatgttcctg	aaactgcttg	acgaaggtcg	tgcaggcgag	aacgttggtg	ttctgctgctg	540
tggtatcaag	cgtgaagaca	tcgaacgtgg	tcagggttctg	gctaaaccag	gytcyatcaa	600
gccacacacc	aagttcgaat	cagaagttta	tattctgagc	aaagatgaag	gcggycgtca	660

tactccgttc ttcaaaggct accgtccaca gttctacttc cgtacaactg acgtgaccgg 720
taccatcgaa ttgccagaag gcgtggaaat ggtaatgcc a ggc 763

<210> 98
<211> 828
<212> DNA
<213> *Kingella kingae* ATCC 23330

<400> 98
cggcgcaatc ttggtatggt cagcagctga cggtcctatg ccacaaactc gcgaacacat 60
cttggttggt cgccaagtag gtgtacctta tatcatcgta ttcatagaaca aatgcgacat 120
ggtcgatgat gctgagttgt tggaattggt tgaatggaa atccgtgact tgttgtctag 180
ctacgatttt ccaggcgacg attgccaat cgttcaagg tctgcattgc gygcattgga 240
aggcgacgct gcatacaaag aaaaaatctt tgaattgggt gctgctttgg atagctacat 300
tcctactcca gaacgtgctg ttgataaacc attcttggtg ccaatcgaag atgtattctc 360
tatctctggt cgtggtacag tagttactgg tctgttagag cgcggtatca tcaaagtagg 420
cgaagagatt gaaatcggtg gtttgaaaga cagcgaacaa accacttgta ctggcggtga 480
aatgttccgc aaattgttgg acgaagggtc agctgggtgat aacgttggtg tattattgcg 540
tggtacgaag cgtgaagacg ttgaacgtgg tcagggtattg gctaaaccag gttctatcac 600
tccgcacact aaatttgaag ctgaagtgtg tgtgttgagc aaagaagaag gtggccgtca 660
tacgccattc ttcgctaact accgccaca attctacttc cgtacgactg acgtaactgg 720
tgcagttact ttgtctgagg gtgtggaaat ggttatgcc a ggcgaaaacg tgaaaatcac 780
tggtgagttg attgcaccta tcgctaggaa aacggtttgc gttttgcg 828

<210> 99
<211> 828
<212> DNA
<213> *Klebsiella ornithinolytica* ATCC 31898

<400> 99
ggcgcgatcc tgggtgttgc tgcgactgac ggcccgatgc cgcagactcg tgagcacatc 60
ctgctgggtc gtcaggtagg cgttccgtac atcatcgtgt tctgaacaa atgcgacatg 120
gttgatgacg aagagctgct ggagctgggt gaaatggaa tccgtgagct gctgtctcag 180
tacgacttcc cggcgacga cagccgacg gttcgtggtt ccgctctgaa agcgtctgga 240
ggcgaagcag actgggaagc gaaaatcatc gaactggctg gctacctgga ttcttacatc 300
ccggaaccag agcgtgcatg tgacaagccg ttcctgctgc cgatcgaaga cgtattctcc 360
atctccggtc gtggtaccgt tgttaccggt cgtgtagagc gcggtatcat caaagtgggc 420
gaagaagtgg aaatcggttg tatcaaagag actgcgaagt ctacctgtac tggcggtgaa 480
atgttccgca aactgctgga cgaaggccgt gctggtgaga acgttggtgt tctgctgcgt 540
ggtatcaaac gtgaagaaat cgaacgtggt cagggtactg ctaagccggg ctctatcaag 600
ccgcacacca agttcgaatc tgaagtgtac attctgtcca aagacgaagg cggccgtcat 660
actccgttct tcaaaggcta ccgtccgcag ttctacttcc gtacaactga cgtgactggc 720
accatcgaac tgccggaagg cgtagagatg gtcattgccg gcgacaacat caaaatggtt 780
gttaccctga ttcacccgat cgcgatggac gatggtctgc gtttcgca 828

<210> 100
<211> 749
<212> DNA
<213> *Klebsiella oxytoca* ATCC 33496

<400> 100
gatgccgcag actcgtgagc acatcctgct gggtcgtcag gtaggcgttc cgtacatcat 60
cgtgttcctg aacaagtgcg acatgggtga tgacgaagag ctgctggaac tgggtgaaat 120
ggaagtccgt gaacttctgt ctacgtacga tttcccgggc gacgacactc cgatcgttcg 180
tggttctgct ctgaaagcgc tggaaggcga cgcwagtggt gaakckaaaa tcatcgaact 240
ggctggcttc ctggattctt acattccgga accagagcgt gcgattgaca agccgttcct 300
gctgccgatc gaagacgtat tctccatctc cggctcgtgt accgttggtt ccggtcgtgt 360
agagcgcggt atcatcaaag ttggcgaaga agttgaaaty gttggtatya aagacactgc 420
taagtctacc tgtactggcg ttgaaatggt ccgcaaaactg ctggacgaag gccgygctgg 480
tgagaacggt ggtgttctgc tgcgtgggtat caaacgtgaa gaaatcgaac gtgggtcagg 540
actggctaag cggggtctc tcaagccgca caccaagttc gaatctgaag tttatctcct 600
gtccaaagac gaaggcggcc gtcacactcc gttcttcaaa ggctaccgtc cgcagttcta 660
cttccgtaca actgacgtga ctggcaccat cgaactgccg gaaggcgtag agatggttat 720

gccgggcgac aacatcaaaa tgggttgta

749

<210> 101
<211> 830
<212> DNA
<213> *Klebsiella planticola* ATCC 33531

<400> 101
tggcgcgatc ctggttggtg ctgcgactga cggcccgatg ccgcagactc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttccgta catcatcgtg ttcctgaaca aatgcgacat 120
ggttgatgac gaagagctgc tggaactggg tgaaatggaa gtctgtgagc tgctgtctca 180
gtacgacttc ccgggcgacg aactccgat cgttcgtggg tccgctctga aagcgctgga 240
aggcgaagca gactgggaag cgaaaatcat cgaactggct ggctacctgg attcttacat 300
cccggaacca gagcgtgcga ttgacaagcc gttcctgctg cctatcgaag acgtattctc 360
catctccggt cgtgggtacc ttgttaccgg tcgtgtagag cgcggtatca tcaaagtggg 420
cgaagaagtt gaaatcgttg gtatcaaaga tactgctaar tcwacctgta cyggcggttg 480
aatgttccgc aaactgctgg acgaaggccg tgctgggtgag aacgttgggt ttctgtctgc 540
tggtatcaaa cgtgaagaaa tcgaacgtgg tcaggtagct gctaagccgg gctctatcaa 600
gccgcacacc aagttcgaat ctgaagtgtg cattctgtcc aaagacgaag gcggccgtca 660
tactccggtt ttcaaaggct accgtccgca gttctacttc cgtacaactg acgtgactgg 720
caccatcgaa ctgccggaag gcgtagagat ggtaatgccg ggcgacaaca tcaaaatggg 780
tgttaccctg attcaccraa tcgcgatgga cgacggtctg cgtttcgcaa 830

<210> 102
<211> 806
<212> DNA
<213> *Klebsiella pneumoniae* subsp. *ozaenae* ATCC 11296

<400> 102
cctggttggt gctgcgactg acggcccgat gccgcagact cgtgagcaca tcctgctggg 60
tcgtcaggta ggcgttccgt acatcatcgt gttcctgaac aaatgcgaca tgggtgatga 120
cgaagagctg ctggaactgg ttgagatgga agttcgtgaa ctgctgtctc agtacgattt 180
cccgggcgac gacaccccca cgttccgtgg ttctgctctg aaagcgctgg aaggcgacgc 240
agagtgggaa gcgaaaatca tcgaactggg tggccacctg gataacctata tcccggaacc 300
agagcgtgcg attgacaagc cgttcctgct gccgatcgaa gacgtattct ccatctccgg 360
tcgtgggtacc gttgttaccg gtcgtgtaga gcgcggtatc atcaaagtag gtgaagaagt 420
tgaaatcggt ggtatcaaaag aaaccgcgaa aaccacctgt actggcggtg aaatgttccg 480
caaaactgct gacgaaggcc gtgctgggtg gaacgtaggg gttctgctgc gtggatcaa 540
acgtgaagaa atcgaacgtg gtcaggtagt ggctaagccg ggcaccatca acccgcacac 600
caagttcgaa tctgaagtgt acatcctgtc caaagacgaa ggccggccgtc atactccgtt 660
cttcaaaggc taccgtccgc agttctactt ccgtactact gacgtgactg gcaccatcga 720
actgccggaa ggcgtagaga tggtaatgcc ggcgacaac atcaaaatgg ttgttaccct 780
gatccaccgc atcgcgatgg acgacg 806

<210> 103
<211> 743
<212> DNA
<213> *Klebsiella pneumoniae* subsp. *pneumoniae* ATCC 13883

<400> 103
gcagactcgt gagcacatcc tgctgggtcg tcaggtaggc gttccgtaca tcatcgtggt 60
cctgaacaaa tgcgacatgg ttgatgacga agagctgctg gaactgggtg agatggaagt 120
tcgtgaactg ctgtctcagt acgatttccc gggcgacgac actccgatcg ttcgtgggtc 180
tgctctgaaa gcgctggaag gcgacgcaga gtgggaagcg aaaatcatcg aactggctgg 240
ccacctggat acctatatcc cggaaaccaga gcgtgcgatt gacaagccgt tcctgctgcc 300
gatcgaagac gtattctcca tctccggtcg ttgtaccggt gttaccggtc gtgtagagcg 360
cggtatcatc aaagtaggtg aagaagttga aatcgttggg atcaaagaaa ccgcgaaaac 420
cacctgtact ggcgttgaaa tgttccgcaa actgctggac gaaggccgtg ctggtgagaa 480
cgtagggtgt ctgctgcgtg gtatcaaacc tgaagaaatc gaacgtgggtc aggtactggc 540
taagccgggc accatcaacc cgcacacca gttcgaatct gaagtgtaca tcctgtccaa 600
agacgaagac ggcggtcaca ctccgttctt caaaggctac cgccgcaggt tctacttccg 660
tactactgac gtgactggca ccatcgaact gccggaaggc gtagagatgg taatgccggg 720
cgacaacatc aaaatgggtg tta 743

<210> 104
<211> 819
<212> DNA
<213> *Klebsiella pneumoniae* subsp. *rhinoscleromatis* ATCC 13884

<400> 104
tgggttggtgc tgcgactgac ggcccgatgc cgcagactcg tgagcacatc ctgctgggtc 60
gtcaggtagg cgttccgtac atcatcgtgt tcctgaacaa atgcgacatg gttgatgacg 120
aagagctgct ggaactgggt gagatggaag ttctgtaact rctgtctcag tacgatttcc 180
cgggcgacga caccgccatc gttcgtgggt ctgctctgaa agcgttgaa ggcgacgcag 240
agtgggaagc gaaaatcatc gaactggctg gccacctgga tacctatata ccggaaccag 300
agcgtgcatg tgacaagccg ttctctgctg ccatcgaaga cgtattctcc atctccggctc 360
gtggtagcgt tgttaccggt cgtgtagagc gcggtatcat caaagtaggt gaagaagtgt 420
aaatcggttg tatcaaagaa accgcgaaaa ccacctgtac tggcggtgaa atgttccgca 480
aactgctgga cgaaggccgt gctggtaga acgtagggtg tctgctgcgt ggtatcaaac 540
gtgaagaaat cgaacgtggt caggtagctg ctaagccggg caccatcaac ccgcacacca 600
agttcgaatc tgaagtgtac atcctgtcca aagacgaagg cggccgtcac actccgttct 660
tcaaaggcta ccgtccgcag ttctacttcc gtactactga cgtgactggc accatcgaac 720
tgccggaagg cgtagagatg gtaatgcgg gcgacaacat caaatgggt gttaccctga 780
tccatccgat cgcgatggac gacggctctg gtttcgcaa 819

<210> 105
<211> 832
<212> DNA
<213> *Kluyvera ascorbata* ATCC 33433

<400> 105
cggcgcgac ctggttggtg ctgcgactga tggccctatg ccacagactc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttcctta catcatcgtg ttctgaaca aatgygacat 120
ggttgatgac gaagagctgc tggaactggg tgaatggaa gttcgtgaac ttctgtctca 180
gtacgatttc ccaggcgacg atactccaat catccgtggg tctgtcttga aagcgttgga 240
aggcgatgca gagtgggaag cgaatatcat cgaactgggt ggcttcctgg attcttacat 300
cccagaacca gaacgtgcta tcgataagcc gttcctgctg ccaatcgaag acgtattctc 360
catctccggt cgtggtagcg ttgttaccgg tcgtgtagag cgcggtatca tcaaagtgtg 420
ygaagaagt gaaatcggtg gtatcaaaga caccgctaag tctacctgta ccggcggtga 480
aatgttccgc aaactgctgg acgaaggccg tgctggtagg aacgttggtg ttctgctgcg 540
tggtatcaaa cgtgaagaaa tcgaacgtgg tcaggttctg gctaagccag gctctatcaa 600
gccgcacacc aagttcgaat ctgaagtgtg cattctgtcc aaagacgaag gcggccgtca 660
tactccgttc ttcaaaggct accgtccaca gttctacttc cgtactactg acgtgaccgg 720
taccatcgaa ctgccagaag gcgttgagat ggtaatgccg ggcgacaaca tcaagatggt 780
tgtgactctg atccacccaa tcgcgatgga cgacggcctg cgtttcgcaa cc 832

<210> 106
<211> 830
<212> DNA
<213> *Kluyvera cryocrescens* ATCC 33435

<400> 106
tggcgcgatc ctggttggtg ctgcaactga tggccctatg ccacagactc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttcctta catcatcgtg ttctgaaca aatgtgacat 120
ggttgatgac gaagagctgc tggaactggg tgaatggaa gttcgtgaac ttctgtctca 180
gtacgatttc ccaggcgacg aactcctat cgttcgtggg tccgcgtgga aagcgttgga 240
aggcgacgct gagtgggaag caaaaatcat cgaactgggt ggcttcctgg attcttacat 300
cccagaacca gagcgtgcga ttgataagcc gttcctgctg ccaatcgaag acgtattctc 360
catctccggt cgtggtagcg ttgttaccgg tcgtgtagag cgcggtatca tcaaagtgtg 420
tgaagaagt gaaatcggtg gtatcaaaga cactgctaag tctacctgta ccggcggtga 480
aatgttccgc aaactgctgg acgaaggccg tgctggtagg aacgttggtg ttctgctgcg 540
tggtatcaaa cgtgaagaaa tcgaacgtgg tcaggttctg gctaagccag gctccatcaa 600
gccgcacacc aaattcgaat ctgaagtgtt catcctgtcc aaagacgaag gcggccgtca 660
tactccgttc ttcaaaggct accgtccaca gttctacttc cgtactactg acgtgactgg 720
taccatcgaa ctgccagaag gcgtagagat ggtaatgccg ggcgacaaca tcaaatgggt 780
tgttaccctg atccacccaa tcgcgatgga cgacggctct cgtttcgcaa 830

<210> 107
 <211> 826
 <212> DNA
 <213> *Kluyvera georgiana* ATCC 51603

```
<400> 107
cgcgatcctg gttgttgctg cgactgacgg cccgatgccg cagactcgtg agcacatcct 60
gctgggtcgt cagggtggcg ttccgtacat catcgtgttc ctgaacaaat gcgacatggg 120
tgatgacgaa gagctgctgg aactgggtga aatggaagtt cgtgaacttc tgtctcagta 180
cgacttcccc ggcgacgaca cgccgatcgt tcgtggttct gctctgaaag cgctggaagg 240
cgacgctgag tgggaagcga aaatcatcga actggcgggc ttcttgattt cttacatccc 300
ggaaccagag cgtgcgattg acaagccgtt cctgctgccg atcgaagacg tattctccat 360
ctccggtcgt ggtaccgttg ttaccggtcg tgtagaacgc ggtatcatca aagttggcga 420
agaagttgaa atcgttggtg tcaaagacac cgctaagtct acctgtactg gcgttgaaat 480
gttccgcaaa ctgctggacg aaggccgtgc tggtgagaac gttggtgttc tgctgcgtgg 540
tatcaaactg gaagaaatcg aacgtgggtc ggtactggct aagccgggtt ctatcaagcc 600
gcacaccaag ttcgaaatctg aagtgtacat tctgtccaaa gacgaaggcg gccgtcatac 660
tccgttcttc aaaggctacc gtccgcagtt ctacttccgt actactgacg tgactggcac 720
catcgaactg ccggaaggcg ttgagatggg aatgccgggc gacaacatca aaatggttgt 780
taccctgatc caccgatcg cgaaggacga aggtctgcgt ttcgca 826
```

<210> 108
 <211> 803
 <212> DNA
 <213> *Lactobacillus casei* subsp. *casei* ATCC 393

<220>
 <221> misc_feature
 <222> (768)..(768)
 <223> n represents any nucleotide

```
<400> 108
gctgctgatg gcccaatgcc acaaactcgt gaacatatct tactttcacg tcaagttggg 60
gttccatata tcgttgattt catgaacaaa tgtgacatgg ttgacgatga agaattacta 120
gaattagttg aaatggaaat tcgtgatcta ttaactgaat atgaattccc tggcgatgac 180
attcctgtaa tcaaagggtc agctcttaaa gcacttcaag gtgaagctga ctgggaagct 240
aaaattgacg agttaatgga agctgtagat tcttacattc caactccaga acgtgatact 300
gacaaaccat tcatgatgcc agttgaggat gtattctcaa tcaactggcg tggaaacagtt 360
gcaactggac gtgttgaacg tggacaagtt aaagtgggtg acgaagtaga agttatcggt 420
attgaagaag agagcaaaaa agtagtagta actggagtag aaatgttccg taaatyacta 480
gattacgctg aagctggcga caacattggc gcacttctac gtggtgttgc tctggaagat 540
atccaacgtg gtcaagtatt agctaaacca gggtcgatta ctccacacac taacttcaaa 600
gctgaaactt atgttttaac taaagaagaa ggtggacgtc acactccatt cttcaacaa 660
taccgcccac aattctattt ccgtactact gacgttaact gtattgttac acttccagaa 720
ggtactgaaa tggtaatgcc tgggtgataac attgagcttg cagttganct aattgcacca 780
atcgctatcg aagacggtac taa 803
```

<210> 109
 <211> 825
 <212> DNA
 <213> *Lactococcus lactis* subsp. *lactis* ATCC 19435

```
<400> 109
cgggtgcaatc ctggttggtg ctgcaactga tggaccaatg ccacaaactc gtgaacacat 60
cttgctttca cgtcaagttg gtgttaataa ccttatcgtc ttccttaaca aggctgacct 120
tggtgatgat gaagaattga tggaaactcg tgaatggaa gttcgtgacc tcttgagcga 180
atcgcacttc ccaggtgacg atattcctgt aatcgctggg tcagcacttg gtgctttgaa 240
cgggtgaacca caatgggttg cttaaagttg agaattgatg gacatcgttg atgaatacat 300
cccaactcca gaacgcgaca ctgacaaacc actccttctt ccagtcgaag acgtattctc 360
tatcactggg cgtggtacag ttgcttcagg acgtatcgaa cgtggtactg ttaaagttgg 420
tgacgaagtt gaaactcgtt gtatcaaaga agaaactaaa aaagctgttg ttactggtat 480
cgaaatgttc cgtaaaacac ttactgaagg tcttgctggg gataacgtcg gtgcacttct 540
ccgtggtatc caacgtgacg aaatcgaacg tgggtcaagtt attgctaaac caggttcaat 600
cactccacac aaacttttct aaggtgaagt ttacgtattg agcaaagaag aaggcggacg 660
```


tcacactcca	ttcttcgaca	actaccgtcc	tcaattctac	ttccacacaa	ctgacggtac	720
tggttcagtt	aaacttccag	aaggaaactga	aatggtaatg	cctgggtgaca	acgtgcatat	780
cgacggttgaa	ttgatccacc	cagttgcat	cgaacaaggt	actac		825

<210> 110
 <211> 824
 <212> DNA
 <213> *Leclercia adecarboxylata* ATCC 23216

<400> 110						
ggcgcgatcc	tggttgttgc	tgcgactgac	ggcccaatgc	ctcagacccg	tgagcacatc	60
ctgctgggtc	gtcaggtagg	cgttcccttc	atcatcgtgt	tcctgaacaa	atgcgacatg	120
gttgatgacg	aagagctgct	ggaactgggt	gagatggaag	ttcgtgaact	yctgtcccag	180
tacgacttcc	cgggcgacga	caccccaatc	gttcgtgggt	ctgcgctgaa	agcgctggaa	240
ggcgaagcag	agtgggaaga	gaaaatcatc	garctgggtg	gctacctgga	ttcctacatc	300
ccagagccag	agcgtgcat	tgacaagccg	ttcctgctgc	ctatcgaaga	cgtattctcc	360
atctccggtc	gtggtaccgt	tgttaccggt	cgtgtagagc	gcggtatcat	caargttggc	420
gaagaagtgt	aaatcgttgg	tatcaaggac	actgctaagt	ctacctgtac	cggcgttgaa	480
atgttccgca	aactgctgga	cgaaggccgt	gccggtgaga	acgttggtgt	tctgctgcgt	540
ggtatcaaac	gtgaagaaat	cgaacgtggt	caggttcttg	ctaagccagg	ctcyatcaag	600
ccgcacacca	agttcgaatc	tgaagtgtac	atcctgtcya	aagacgaagg	cgcccgatcat	660
actccgttct	tcaaaggcta	ccgtccacag	ttctacttcc	gtackactga	cgtgaccggt	720
accatcgarc	tgccagaagg	cgtttgatag	gtaatgccag	gcgacaacat	caaaatgggt	780
gttaccctga	tccaccaat	cgcaatggac	gatgggtctgc	gttc		824

<210> 111
 <211> 838
 <212> DNA
 <213> *Legionella micdadei* ATCC 33218

<400> 111						
cggagcgata	ttagtagtat	cagcagcgga	tggcccaatg	cctcaaacga	gagagcacat	60
actyttatcc	cgscaggtag	gtgttcccta	tatagtagtg	ttcttaaaca	aagctgacat	120
ggtggatgat	gcggagttat	tagaattagt	tgaatggaa	gtacgcgayt	tggtgagcag	180
ctatgaattt	ccaggagatg	agatcccgat	tgtagtgtgt	tcagcattaa	aagcatttga	240
aggcgatacg	agtgatatag	gtgtaccagc	gattgagaag	ttagttgaga	cgatggattc	300
ttatatacct	gagccggtaa	gaaacatcga	taaaagtctc	ttgttaccga	tcgaagacgt	360
gtttctcaata	tctggacgag	gaacagtagt	aacaggacgt	atcgaaagcg	ggatcatcaa	420
agttgggtgag	gaagtcgaga	ttgttggat	acgtgacact	caaaagacga	catgcacagg	480
cgttgaaatg	ttccgtaaat	tacttgacga	aggtcgagct	ggagacaacg	ttggtatatt	540
gctacgtggt	acgaagcggt	atgaagttga	acgcggacaa	gtattagcta	agccgggaag	600
cattaaaccg	catactaaat	ttgaagctga	agtgtatgtg	ttgtcaaaaag	atgaaggttg	660
acgtcatacc	ccattcttta	acggatatcg	gcctcaattt	tacttcagga	ccacagacgt	720
aactggttct	tgtgatattac	ctgarggtat	agaaatggta	atgccaggtg	ataacgtcaa	780
gctgattggt	agcttacact	caccgattgc	tatggacgaa	ggtttgcggt	ttgcaatc	838

<210> 112
 <211> 838
 <212> DNA
 <213> *Legionella pneumophila* subsp. *pneumophila* ATCC 33152

<400> 112						
cggagcgata	ctgggtgtat	cagcagctga	tggtcctatg	ccacaaacga	gggaacacat	60
tctattgtct	cgccaggtag	gtgttccata	tattgttgtg	ttcatgaaca	aagcggatat	120
ggttgatgac	cctgagttat	tagagttagt	ggaaatggaa	gtgcgagatt	tattaagcag	180
ttacgatttc	ccaggggatg	acatacctat	tggtgttgggt	tcagctttga	aagcatttga	240
aggtgaagac	agtgatatag	gcgttaaggc	tattgagaaa	ttggttgaaa	caatggattc	300
atacatttct	gagccagtta	gaaacataga	caagccattt	ttgttgccga	ttgaagacgt	360
atcttcaatt	tctggacgcg	gaacagtgggt	aactggctcg	gtagagagtg	gaattgttaa	420
agttgggtgag	gaagttgaaa	ttgttggaa	aagagacacc	caaaagacga	cttgtacggg	480
tggttgatg	ttccgtaaat	tacttgatga	aggtcgagct	ggtgataacg	ttggtgtgtt	540
attacgaggt	acgaagcgag	atgaagtggg	gcgtggacag	gtattggcga	agccaggaac	600
catcaagcca	cacaccaagt	ttgaagcaga	agtgatgta	ttatccaagg	aagaagcgcg	660

```
acgtcacact ccattcttta atggataccg tccacaattc tatttcagaa ccaactgacgt 720
gacagggtact tgtgacttgc catcaggagt tgaaatggta atgcctggag ataatgtgca 780
attagttggt agcttgcattg ctccgattgc gatggatgaa ggtttaagat tcgcaatt 838
```

<210> 113
 <211> 828
 <212> DNA
 <213> *Leminorella grimontii* ATCC 33999

```
<400> 113
gtgcaatcct ggtagtagca gcgactgacg gcccgatgcc tcagactcgc gagcacatcc 60
tgctgggtcg tcaggtaggc gttccgtaca tcatcgtatt cctgaacaag tgcgatatgg 120
ttgatgacga agagctgctg gagctgggtg aratggaagt tcgcgaactg ctgtctcagt 180
acgacttccc gggcgacgac actccggtag tccgcggttc agcgtgaaa gcgctggaag 240
gcgaagccga gtgggaarcg aaaatcatcg agctggcagg ccmctcggat acttatatcc 300
cagaacctga gcgtgcgatt gacaagccgt tcctgctgcc katcgaagac gtattctcta 360
tctccggccg tggtagcggt gttaccggtc gtgtagagcg cggcatcatc aaagtccgtg 420
aagaagtggg aatcgctcgt atcaaagata ccaccaagac cacctgtacc ggcgttgaaa 480
tggtccgtaa gctgctggac gaaggccgtg cgggcgagaa cgtgggcgtt ctgctgcgcg 540
gtaccaagcg tgacgaaatc gaacgtggtc aagttctggc caagccgggc accatcactc 600
ctcacacca gtctgtgtca gaagtgtata tcttgagcaa ggatgaaggc ggccgtcata 660
ctccgttctt caaaggctac cgtcctcagt tctacttccg tacgactgac gtgacaggca 720
ccatcgaact gccggaaggc gtagagatgg taatgccagg cgacaacatt cagatgaccg 780
taagtctgat tgcgccgatc gcaatggacg aaggtctgcg cttcgcaa 828
```

<210> 114
 <211> 826
 <212> DNA
 <213> *Leminorella richardii* ATCC 33998

```
<400> 114
gctatcctgg ttgttgctgc gactgacggc ccaatgcctc agactcgtga gcacatcctg 60
ctgggtcgcc aggtaggcgt tccttacatc atcgtgttcc tgaacaagtg cgacatgggt 120
gatgacgaag agctgctgga actggtagaa atggaagttc gtgaacttct gtctcaatac 180
gacttcccgg gcgacgatac gccggttgtt cgcggttcag cgctgaaagc gctggaagg 240
gacgcygagt gggaarcgaa aatcattgaa ctggcggaat ccttrgatac ttayattcca 300
gagccagagc gtgcgattga caagccgttc ctgctgccta tcgaagacgt tttctctatc 360
tctggccgtg gtactgtagt caccggtcgt gttaggcgcg gcacatcaa agttgggtgaa 420
gaagtggaaa tcgtgggaat caaagacacc accaagacca cctgtactgg cgttgaaatg 480
ttccgtaagc tgcgtggacg aggccgtgca ggtgagaacg ttggtgttct gctgcgygg 540
actaagcgtg acgaaatcga acgtggtcag gtactggcta agccaggcac catcactcct 600
cacacagaat tcgtgtcaga agtgtatatc tctagcaagg atgaaggcgg ycgctacact 660
ccgttcttca aaggctaccg tcctcagttc tagttccgta cgactgacgt gaccggcacc 720
atcgaactgc cagaaggcgt agagatggta atgccaggcg ataacatcca gatggtagtt 780
acgctgattg ccccaatcgc gatggacgaa ggtctgcgct tcgcaa 826
```

<210> 115
 <211> 843
 <212> DNA
 <213> *Leptospira interrogans* ATCC 23581

```
<400> 115
tgcggcgatt cttgtagtat ccgcaactga cggacctatg ccacaaacaa aagaacatat 60
ccttcttgct cgtcaggtag gtgttccata tgtaattgta ttcattaaca aagcagatat 120
gcttgctgct gacgaaagag cagaaatgat cgaaatgggt gagatggacg ttcgtgaact 180
tctcaataag tatagcttcc caggagatac aactcctatc gttcatgggt ctgcggtaaa 240
agcacttgag ggcgatgaat ctgaaattgg gatgcctgca attctcaaat tgatggaagc 300
tctggatact ttctgttcaa atccaaaacg tgtaatcgac aaacctttcc ttatgccagt 360
agaagacgtt ttctcgatca ctggctcgtg aactggtgca actggaagag tggaacaagg 420
tgttttgaaa gtgaacgacg aagttgaaat tctcggtatc cgcccaacaa caaaaactgt 480
tgttaccggt atcgaaatgt tcagaaaact tctcgatcaa gcggaagctg gcgacaacat 540
cggcgctctt cttcgtggaa ctaaaaaaga agaaatcgaa agaggggcaag ttcttgcgaa 600
gccaggttct atcactcctc acaaaaagtt tgccgctgag gtgtatgtat taactaagga 660
```

tgaaggcgga	cgtcatactc	cgtttatcaa	taactaccgt	cctcagtttt	actttagaac	720
aactgacgta	accggagttt	gtaaccttcc	taatgggtgc	gaaatgggta	tgccctgggta	780
taacgtttct	ttgacgggtg	aattgattag	cccgatcgca	atggacaagg	gtcttaagtt	840
cgc						843

<210> 116
 <211> 832
 <212> DNA
 <213> Megamonas hypermegale ATCC 25560

<400> 116						
cggtgctatc	ctcgtttgta	gtgctgctga	tggctcctatg	cctcagactc	gtgaacacat	60
ccttctcgct	cgtcagggtg	gtgttccagc	tatcggttga	ttcctcaaca	aagctgacca	120
ggttgatgac	cctgaacttc	tccaacttgt	tgaatggaa	gttcgtgaac	ttctttccag	180
ctatgacttc	ccaggcgatg	acgttccagt	aatcactggg	tccgctcttc	aggctctcga	240
agggcagcaa	gaagctaaaa	agaaaattct	tgaattaatg	gatgctgttg	atgattacat	300
cccaactcca	acacgtgaca	ctgataaacc	tttcttaatg	ccagttgaag	acgtattcac	360
aattactggg	cgtgggtactg	ttgctacagg	ccgtgttgaa	cgtggcgaac	ttaaacttgg	420
tgacagcggt	gaaatcggtg	gtctttccga	tgaaaagaaa	tccactactg	taactgggat	480
cgaaatgttc	cgcaaaatgc	ttgatagcgc	tgttgcctgg	gataacatcg	gtgcacttct	540
tcgtgggtatt	gaccgtaaaag	aaatcgaaacg	tggctcaagtt	cttgctaaac	ctggcacaat	600
tcattccacac	aaaaaattca	aagctcaggt	ttacgtatta	actaaagaag	aaggtggacg	660
tcatactcca	ttctttctcca	actatcgctc	acagttctat	ttccgtacta	ctgacgttac	720
tgggtgttgta	actcttccag	aagggtactga	aatgggttatg	cctggcgata	acattgaaat	780
gagcatcgaa	ctcatcactc	caatcgctat	tgaaaaaggt	cttcgcttcg	ct	832

<210> 117
 <211> 820
 <212> DNA
 <213> Mitsuoella multacida ATCC 27723

<400> 117						
tgggtgctatc	ctcgtcggtt	ccgctgctga	tggccccgatg	ccgcagacgc	gtgagcacat	60
cctgctcgct	cgccagggtc	gtgttccggc	aatcggtgtc	ttcctcaaca	agggtgacca	120
ggttgacgat	ccggagctcc	tcgagctcgt	cgagatggaa	gttcgcgagc	tgctctccag	180
ctacgacttc	ccgggcgatg	acatccctgt	aatcgctggg	tccgctctga	aggccctcga	240
agggcagcaa	gagcagaaga	agaacatcct	caagctcatg	gaagctgtcg	atgagtacat	300
cccagcgccg	gtccgcgaca	acgctaagcc	gttcctgatg	ccggtcgagg	atgtcttcac	360
gatcacgggc	cgtgggtacgg	ttgcaacggg	ccgcgttgag	cgtgggtgagc	tcaagatgaa	420
cgatacgggt	gagatcggtg	gtctgcagga	cgagccgcgt	cagacgggtg	tcacgggcat	480
cgagatgttc	cgcaagatgc	ttgatttcgc	tgaggctggc	gataacatcg	gtgctctgct	540
ccgtgggtatc	gaccgcaagg	agatcgagcg	tggccaggtt	ctcgcaaagc	cgggcacgat	600
tcattccgcac	acgaagtcca	aggctcaggt	ctatgtcctg	acgaaagaag	aaggcggccg	660
tcatacgccg	ttcttcacga	actatcgccc	gcagttctac	ttccgcacga	cggacgtaac	720
tggcgtagtc	aaactgccgg	aaggcacgga	gatgggttatg	cctggcgata	acgtcgagat	780
ggaagttgag	ctcatcacc	cgatcgctat	cgagaagggc			820

<210> 118
 <211> 831
 <212> DNA
 <213> Mobiluncus curtisii subsp. holmesii ATCC 35242

<400> 118						
cggcgctatc	ctcgtgggtg	ctgctactga	cgggtccgatg	gctcagacca	aggaacacat	60
cctgttgggt	aagcagggtg	gcgtgccctc	cctcctgggt	gctctgaaca	agtgcgattc	120
ttccgatgtg	gacgaagaca	tgctcgaaat	cgctcaggac	gaaatccgcg	atgacctgga	180
gaagcagggc	ttcgatcgtg	actgcccgat	tatccacgtt	tccgctctga	aggccctgga	240
agggcagcccc	gagtggaaca	agaagattga	agagctcatg	gaagcgggtc	atacctacat	300
tcctgagcct	gttcgtgacc	tcgacaagcc	gttcttgatg	cctatcgaa	acgtcttcac	360
cattactggg	cgcggtaccg	tagtgaccgg	tcgtgtggaa	cgcggaagc	taccgttgaa	420
cgccgaagtg	gaaatcgtag	gtattcgctc	tacgcaaaag	accaccgtta	ccggtatcga	480
aatgttccac	aagtccatgg	acgaagccta	cgccggcgag	aactgtgggtc	tggtgctgcg	540
tggcaccaag	cgtgaggacg	ttgagcgcg	tcagggtgtc	tgcatctctg	gctccgtgac	600

```

cccgcacacc aagttcgagg gcaaggtcta catcttgaag aaggacgaag gtggacgtca 660
caagtcgttc tacgacggct accgcccga gttcttcttc cgcaccaccg acgtgaccgg 720
tggtattcac ctgcccgaag gcaccgaaat ggttatgcct ggcgacacca ccgaaattag 780
cgttgagctg attcagccta tcgctatgga ggaaggtctc ggcttcgcta t 831

```

<210> 119
 <211> 825
 <212> DNA
 <213> *Moellerella wisconsensis* ATCC 35017

```

<400> 119
ggtgcaattc tgggttgttg tgcaactgat ggccctatgc cacagactcg tgagcacatc 60
ctgttaggtc gtcaggttgg cgttccatac atcatcgttt tcctgaacaa atgtgacatg 120
gtagacgacg aagagctggt agaactgggt gaaatggaag tccgtgagct gctgtctcag 180
tacgatttcc caggcgatga cactccagta atccgtgggt cagcgctgaa agctctggaa 240
ggcgaagctg agtgggaagc taaaatcatt gaactggcag aagcactgga ttcttatatc 300
ccagagccag agcgtgacat tgataagcca ttctgttac caatcgaaga cgtatttctca 360
atttcaggcc gtggtacagt tggtactggc cgtgttgagc gtggtatcgt taaagtcggt 420
gaagaagttg aaatcgttgg tatcaaagat accgtgaaaa caacatgtac tggcgttgaa 480
atgttccgta aactgttggg cgaaggccgt gctgggtgaga acgttggtgt tctgctgcgt 540
ggtactaaac gtgatgatat cgaacgtggc caagtattgg cttaaaccagg ttcaatcact 600
ccgcatacaa ctttcgaatc agaagtttac atcctgagca aagatgaagg tggccgcatc 660
actccattct tcaaaggtta ccgtccacag ttctacttcc gtacaactga cgtaaccggt 720
actatcgaac tgccagaagg cgttgagatg gtaatgccag gtgataacat caaatgatc 780
gttactctga tccacccaat tgcaatggat gcaggctctg gttttt 825

```

<210> 120
 <211> 827
 <212> DNA
 <213> *Branhamella catarrhalis* ATCC 43628

```

<400> 120
tgggtctatc ttggttgttt ctgcaactga tggctctatg ccacaaactc gtgagcatat 60
cctactatct cgtcagggtg gtgtaccata catcatggta ttcatgaaca agtgcgatat 120
ggttgatgat gaagagctac tagaattgggt tgaaatggaa gttcgtgaac ttctatctga 180
ctatgatttc cctgggtgatg ataccccaat catcaaaggc tcagcactag aagcattgaa 240
tggttctgat ggtaaataatg gcgagcctgc agttctagaa ctgctagaca cactagacag 300
ctatatccca gagcctgagc gtgatatcga taagtcattc ttgatgccaa ttgaagatgt 360
cttctcgatc tcaggtcgtg gtacagttgt gactggctcg gttgaatcag gtattattaa 420
agttgggtgat gaaattgaaa tcatcggtat caaaccaact gctaaaacca cctgtactgg 480
tggtgaaatg ttccgtaaac tgtagacga aggtcgtgca ggtgagaact gtggatatct 540
gttgcgtggg actaagcgtg aagaagttca acgcggtcaa gtacttgcaa aaccagggtc 600
aatcaccoca cataactaagt ttgatgctga agtttatgta ctgtcaaaag aagaagggtg 660
tcgtcacacc ccattcttaa atggctatcg cccacagttc tacttccgta ccacagatgt 720
gactggtgcc atcactctac aagaaggtag cgaaatgggt atgcctgggt acaatgttga 780
gatgagtggt gagcttatcc acccaatcgc caggataaag gtctacg 827

```

<210> 121
 <211> 806
 <212> DNA
 <213> *Morganella morganii* subsp. *morganii* ATCC 25830

```

<400> 121
cggcgctatc ctggttgttg ctgcaactga tggccctatg ccacagaccc gtgagcacat 60
cctgttaggt cgtcagggtg gcgttcctta catcatcgta ttctgaaca aatgtgacat 120
ggttgatgat gaagagctgc tggaaactgg tgaaatggaa gttcgtgaac ttctgtctca 180
gtacgatttc cctggcgacg acacgccaat cgttcgcggt tcagcgctga aagcactgga 240
aggcgagcca gagtgggaag ctaaratcgt tgaactggca ggtttctctg attcttacct 300
ccctgagcca gagcgtgcaa ttgacaagcc gttcctgctg ccaatcgaag acgtattctc 360
aatctccggc cgtggtagcc ttgttaccgg tcgtgttgag cgcggtatca tcaaggttgg 420
tgaggaagtt gaaatcgtgg gtatcaaaga tactgcgaaa accacctgta ccggtgttga 480
aatgttccgc aaactgctgg acgaaggccg tgcmggtgag aacgtcgggt ttctgctgcg 540
tggtaccaag cgtgaagaaa tcgaacgtgg tcaggttctg gctaaaccag gttcaatcaa 600

```

accacayacc	aaatttgaat	cagaagttta	tattctgagc	aaagatgaag	gtggtcgtca	660
tactccattc	ttcaaaggyt	accgtccaca	gttctacttc	cgtaccacag	acgtaacagg	720
tactatcgaa	ctgccggaag	gcgttgaaat	ggtaatgccg	ggcgacaaca	tcaaaatgat	780
cgtcaccctg	atccacccaa	tcgcaa				806

<210> 122

<211> 825

<212> DNA

<213> Mycobacterium tuberculosis strain TB 299

<400> 122

ggtgcgatcc	tgggtggctgc	cgccaccgac	ggccccgatgc	cccagacccg	cgagcacggt	60
ctgctggcgc	gtcaagtggg	tgtgccctac	atcctggtag	cgctgaacaa	ggccgacgca	120
gtggacgacg	aggagctgct	cgaactcgtc	gagatggagg	tccgcgagct	gctggctgcc	180
caggaattcg	acgaggacgc	cccggttgtg	cgggtctcgg	cgctcaaggc	gtcgcagggg	240
gacgcgaagt	gggttgccctc	tgtcgaggaa	ctgatgaacg	cggtcgacga	gtcgattccg	300
gacccggtcc	gcgagaccga	caagccgttc	ctgatgcccg	tcgaggacgt	cttcaccatt	360
accggcccg	gaaccgtggt	caccggacgt	gtggagcgcg	gcgtgatcaa	cgtgaacgag	420
gaagttgaga	tcgtcggcat	tcgcccatcg	accaccaaga	ccaccgtcac	cggtgtggag	480
atgttccgca	agctgctcga	ccagggccag	gcgggcgaca	acgttggttt	gctgctgcgg	540
ggcgtcaagc	gcgaggacgt	cgagcgtggc	caggttgctc	ccaagcccgg	caccaccacg	600
ccgcacaccg	agttcgaagg	ccaggtctac	atcctgtcca	aggacgaggg	cgcccggcac	660
acgccgttct	tcaacaacta	ccgtccgcag	ttctacttcc	gcaccaccga	cgtgaccggg	720
gtggtgacac	tgccggaggg	caccgagatg	gtgatgcccg	gtgacaacac	caacatctcg	780
gtgaagttga	tccagcccg	cgccatggac	gaaggtctgc	gtttc		825

<210> 123

<211> 806

<212> DNA

<213> Neisseria cinerea ATCC 14685

<400> 123

cggtgcgatc	ttggtatggt	ccgcagctga	cggtcctatg	ccgcaaactc	gcgaacacat	60
cctgttggcc	cgccaagtag	gtgtacctta	catcatcgctg	ttcatgaaca	aatgcgacat	120
ggttgacgat	gccgagctgt	tggagctggt	tgaatggaa	atccgtgact	tgctgtcaag	180
ctacgacttc	ccaggtgacg	actgcccgat	cgtacaagg	tctgcactga	aagccttgga	240
aggcgacgca	gcttacgaag	aaaaaatctt	cgaattggct	gctgcattgg	acagctacat	300
cccaacacct	gagcgtgcag	tggacaaaac	tttctgttg	cctatcgaag	acgtattctc	360
tatttccgg	cgcggtacag	tagtaaccgg	tcgtgtagag	cgcggtatca	tccacgttgg	420
tgacgagatc	gaaatcgtag	gtctgaaaga	aactcaaaaa	accacttgta	ccggtgttga	480
aatgttccgc	aaactgctgg	acgaagggtca	agctggtgac	aacgtagggtg	tattgctgcg	540
tggtagtaaa	cgtgaagacg	tagagcgttg	tcaagtattg	gctaaaccgg	gtactatcac	600
tcctcacacc	aagttcaaa	cagaagtata	cgtactgagc	aaagaagagg	gtggtcgtca	660
cactccgttc	ttcgctaact	accgtccaca	attctacttc	cgtactaccg	acgtaaccgg	720
cgcggttact	ttggaagaag	gtgtagaaat	ggtaatgccg	ggtgagaacg	taaccattac	780
tgtagaactg	attgcgccta	tcgcta				806

<210> 124

<211> 822

<212> DNA

<213> Neisseria elongata subsp. elongata ATCC 25295

<400> 124

cggcgcaate	ttggtatggt	ccgctgcyga	cggtcctatg	ccgcaaactc	gcgaacacat	60
cctgttggcc	cgccaagtag	gcgtacctta	catcatcgctg	ttcatgaata	aatgcgacat	120
ggttgaygat	gccgaactgc	tggaaactggt	tgaatggaa	atccgtgact	tgctgtcaag	180
ctacgacttc	ccaggcgacg	actgcccgat	cgtacaagg	tccgcactga	aagccttgga	240
aggcgacgca	gcttacgaag	aaaaaatctt	cgaactggct	gctgcattgg	acagctacat	300
cccgacacct	gagcgtgccg	tggacaaaac	gttctgttg	cctatcgaag	acgtattctc	360
tatctccggc	cgtggtacag	tagtaaccgg	tcgtgtagag	cgcggtatca	tccacgtcgg	420
tgacgagatc	gaaatcgtag	gtctgaaaga	aacccaaaaa	accacttgta	ccggtgttga	480
aatgttccgc	aaactgctgg	acgaagggtca	agcaggtgac	aacgtaggcg	tattgctgcg	540
cggtacaaa	cgtgaagaag	tggaaacgcg	tcaagtattg	gctaaaccgg	gtaccatcac	600

tectcacacc	aaattcaaag	cagaagttta	cgtattgagc	aaagaagagg	gtggctcgtca	660
tactccgttc	ttcgctaact	accgtccaca	attctacttc	cgtactaccg	acgtaaccgg	720
tgcggttact	ttggaagaag	gtgtagaaat	ggttatgcct	ggtgagaacg	tggccatcac	780
tgtagaactg	attgcaccta	tcgctatgga	agaaggtctg	cg		822

<210> 125
 <211> 820
 <212> DNA
 <213> *Neisseria flavescens* ATCC 13120

<400> 125						
cggcgcgact	tggtatgttc	cgcagctgac	ggctctatgc	cgcaaaccgg	cgaacacatc	60
ctgttggttc	gccaaagtagg	tgtaccttac	atcatcgat	tcatgaacaa	atgcgacatg	120
gtagacgatg	ccgagctggt	ggaactgggt	gaaatggaaa	ttcgtgactt	gttgtcaagc	180
tacgacttcc	caggcgacga	ctgcccacac	gtacaagggt	ctgcactgaa	agctttggaa	240
ggtgatgctg	cttacgaaga	aaaaatcttc	gaattggctg	ctgccttgga	cagctacatc	300
ccaacacctg	agcgtgctgt	ggacaaacct	ttcttggtgc	ctatcgaaga	cgtattctct	360
atctctggtc	gtggtacagt	agtaaccggg	cgcgtagagc	gcggtatcat	ccacgttggt	420
gacgagatcg	aaatcgtagg	tctgaaagaa	actcaaaaaa	ccacttgtag	cggcggtgaa	480
atgttccgca	aactgctgga	cgaagggtcaa	gcagggtgaca	acgtaggcgt	attgctgctg	540
ggtactaaac	gtgaagacgt	agagcgtggg	caagtattgg	ctaaaccagg	taccatcact	600
cctcacacca	aattcaaagc	agaagtatac	gtactgagca	aagaagaggg	tggtcgtcac	660
actccatttt	tcgctaacta	ccgtccacaa	ttctacttcc	gtactaccga	cgttaactgg	720
gcagttactt	tggagaaggg	cgtagaaatg	gtaatgccag	gtgagaacgt	aaccattact	780
gtagaactga	ttgcgcctat	cgctatggaa	gaagtctgcg			820

<210> 126
 <211> 830
 <212> DNA
 <213> *Neisseria gonorrhoeae* ATCC 49226

<400> 126						
ggtgcaatcc	tggtatgttc	tgtgcccagc	ggccctatgc	cgcaaaccgg	cgaacacatc	60
ctgctggccc	gtcaagtagg	cgtaccttac	atcatcggtg	tcatgaacaa	atgcgacatg	120
gtcgacgatg	ccgagctggt	ggaactgggt	gaaatggaaa	tcgcgcacct	gctgtccagc	180
tacgacttcc	ccggcgacga	ctgcccagac	gtacaagggt	ccgcactgaa	agccttggaa	240
ggcgatgccg	cttacgaaga	aaaaatcttc	gaactggcta	ccgcattgga	cagctacatc	300
ccgactcccg	agcgtgccgt	ggacaaacca	ttcctgctgc	ctatcgaaga	cgtgttctcc	360
atttccggcc	gcggtagcgt	agtcaccggc	cgtgtagagc	gaggtatcat	ccacgttggt	420
gacgagattg	aaatcgctcg	tctgaaagaa	acccaaaaaa	ccacctgtac	cggcggtgaa	480
atgttccgca	aactgctgga	cgaagggtcag	gcggggcgaca	acgtaggcgt	attgctgctg	540
ggtaccaaac	gtgaagacgt	agaacgcggg	cagggtattg	ccaaaccggg	tactatcact	600
cctcacacca	agttcaaagc	agaagtgtac	gtattagaca	aagaagaggg	cggccgccat	660
accccgtttt	tcgccaacta	ccgtcccaaa	ttctacttcc	gtaccactga	cgttaaccgg	720
gcgggttact	tggaaaaagg	tgtggaaatg	gtaatgccgg	gtgagaacgt	aaccattact	780
gtagaactga	ttgcgcctat	cgctatggaa	gaagggtctg	gctttgcat		830

<210> 127
 <211> 816
 <212> DNA
 <213> *Neisseria lactamica* ATCC 23970

<400> 127						
cggcgcgaatc	ttggtatggt	ccgcgcgcga	cggcctatg	ccgcaaacc	gcgaacacat	60
tctgttggtcc	cgccaagtag	gtgtacctta	catcatcgta	ttcatgaaca	aatgcgatat	120
ggctgcacgat	gccgagctgt	tggaaactgg	tgaatggaaa	atccgcgacc	tgctgtcaag	180
ctacgacttc	ccaggcgacg	actgcccac	cgtacaagg	tcgcactga	aagctttgga	240
aggcgatgcc	gcttacgaag	aaaaaatctt	cgaactggct	gccgcattgg	acagctacat	300
cccgactccc	gagcgtgccg	tggacaaacc	gttctgctg	cctatcgaag	acgtattctc	360
catctccggc	cgcggtacgg	tagtaaccgg	ccgtgtagag	cgcggtgtca	tccacgttgg	420
cgacgagatc	gaaatcgctg	gtctgaaaga	aacccaaaaa	accacctgta	ccggtgtcga	480
gatgttccgc	aaactgctgg	acgaagggtc	ggcaggcgac	aacgtaggcg	tattgctgctg	540
cgggtaccaaa	cgtgaagaag	tggaaacgcg	tcagggtatta	gccaaccgg	gtaccatcac	600

tccgcacacc	aagttcaaag	cagaagtgtg	tgtattgagc	aaagaagagg	gcggtcgtca	660
cactccgttc	ttcgccaact	accgtccgca	attctacttc	cgtaccaccg	acgtaaccgg	720
cgcggttact	ttggaagaag	gcgtggaaat	ggtaatgccc	ggtgagaacg	taaccattac	780
tgtagaactg	attgcgccta	tcgctatgga	agaagg			816

<210> 128
 <211> 831
 <212> DNA
 <213> *Neisseria meningitidis* ATCC 13077

<400> 128						
cggtgcaatc	ctggtatggt	cgcagccga	cggtcctatg	ccgcaaacc	gcgaacacat	60
cctgctggcc	cgtcaagtag	gcgtaacctta	catcatcgtg	ttcatgaaca	aatgcgacat	120
ggtcgacgat	gccgagctgt	tggaactggg	tgaaatggaa	atccgcgacc	tgctgtccag	180
ctacgacttc	cccggcgacg	actgcccgat	cgtacaagg	tccgcactga	aagccttgga	240
aggcgatgcc	gcttacgaag	aaaaaatctt	cgaattggct	gctgcattgg	acagctacat	300
cccgactccc	gagcgtgccg	tggaacaaacc	tttcttggtg	cctatcgaag	acgtattctc	360
tatttccggt	cgtggtacag	tagtaaccgg	tcgtgtagag	cgcggtatca	tccacgtcgg	420
tgacgagatc	gaaatcgtag	gtctgaaaga	aactcaaaaa	accacttgta	ccggtggtga	480
aatgttccgc	aaactgctgg	acgaagggtca	agcaggcgac	aacgtaggcg	tattgctgcg	540
cggtaccaaa	cgtgaagacg	tagagcgtgg	tcaagtattg	gctaaaccgg	gtacaatcac	600
tcctcacacc	aagttcaaag	cagaagtata	cgtactgagc	aaagaagagg	gcggcccgca	660
taccccggtc	ttcgccaact	accgtcccca	attctacttc	cgtaccaccg	acgtaaccgg	720
cgcggttact	ttggaagaag	gtgtggaaat	ggtaatgccc	ggcgagaacg	taaccatcac	780
cgtagaactg	attgcgccta	tcgctatgga	agaagggttg	cgctttgcga	t	831

<210> 129
 <211> 815
 <212> DNA
 <213> *Neisseria mucosa* ATCC 19696

<400> 129						
cggcgcaatc	ttggtatggt	ctgctgcyga	cggtcctatg	ccgcaaacc	gygaacacat	60
cctgttgccc	cgtcaagtag	gygtacctta	catcatcgtg	ttcatgaaca	aatgcgacat	120
ggttgacgat	gccgaaytgt	tggaactggg	tgaaatggaa	atccgtgact	tgctgtcaag	180
ctacgacttc	cctggygacg	actgcccgat	tgtacaagg	tctgcaactga	aagccttgga	240
aggcgatgcc	gcttacgaag	aaaaaatctt	cgaactggct	gccgcattgg	acagctacat	300
cccgactccc	gagcgtgccg	tagacaaacc	gttctctgtg	cctatcgaag	acgtattctc	360
catctccggt	cgtggtacag	tagtaaccgg	ccgtgtagag	cgcggtgtta	tccacgttgg	420
tgacgagatc	gaaatcgtag	gtctgaaaga	aacccaaaaa	accacatgta	ccggtggtga	480
aatgttccgc	aaactgctgg	acgaagggtca	agccggtgac	aacgtaggcg	tattgctgcg	540
cggtaccaaa	cgtgaagaag	tggaacgcgg	tcaagtattg	gctaaaccgg	gtaccatcac	600
tcgcacacacc	aaattcaaag	cagaagtgtg	cgtattgagc	aaagaagagg	gtggtcgtca	660
tactccgttc	ttcgctaact	accgtcctca	attctacttc	cgtactaccg	acgtaaccgg	720
tgcggttact	ttggaagaag	gtgtagaaat	ggttatgcct	ggtgagaayg	tagccatyac	780
tgtagaactg	attgcgccta	tygctatgga	agaag			815

<210> 130
 <211> 829
 <212> DNA
 <213> *Neisseria sicca* ATCC 9913

<400> 130						
ggcgcaatct	tggtatgttc	cgctgctgac	ggctcctatgc	cgcaaaccgg	cgaacacatc	60
ctgttgcccc	gccaaagtagg	cgtaccttac	atcatcgtgt	tcatagaaca	atgcgacatg	120
ggtgacgatg	ccgagctggt	ggaactgggt	gaaatggaaa	tccgtgactt	gctgtcaagc	180
tacgacttcc	ctggtgacga	ctgcccgatc	gtacaagggt	ctgcactgaa	agccttgga	240
ggcgacgcgg	cttacgaaga	aaaaatcttc	gaactggctg	ctgcattgga	cagctacatc	300
ccgactcctg	agcgtgccgt	ggacaaaccg	ttctgttg	ctattgaaga	cgtattctcc	360
atctccggtc	gcggtaccgt	agtaaccggc	cgtgtagagc	gcggtgttat	ccacgttggt	420
gacgagattg	aaatcgtagg	tctgaaagaa	acccaaaaaa	ccacttgtag	cggtgttgaa	480
atgttccgca	aactgctgga	cgaagggtcaa	gccggtgaca	acgtaggcgt	attgctgcgc	540
ggtaccaaac	gtgaagaagt	ggaacgcggt	caagtattgg	ctaaaccggg	taccatcact	600

```
cctcacacta aattcaaagc agaagtttac gtattgagta aagaagaggg tggtcgtcat 660
actccgtttc tcgctaacta ccgtcctcaa ttctacttcc gtactaccga cgtaaccggc 720
gcggttactt tggaagaagg tgtagaaatg gttatgcctg gtgagaacgt agccatcact 780
gtagaactga ttgcaccgat cgctatggaa gaaggtctgc gctttgcga 829
```

<210> 131
<211> 814
<212> DNA
<213> *Neisseria subflava* ATCC 14221

```
<400> 131
cggcgcgact tggatatgttc cgcagctgat ggtcctatgc ctcaaactcg cgaacacatc 60
ctgttggttc gccaaagtagg tgtaccttac atcatcgtat tcatgaacaa atgcgacatg 120
gttgacgatg ccgagctggt ggaactgggt gaaatggaaa tccgtgacct gttgtcaagc 180
tacgacttcc caggcgacga ctgcccaatc gtacaagggt ctgcactgaa agctttggaa 240
ggtgacgctg gttacgaaga gaaaatcttc gaattggctg ctgctctgga cagctacatc 300
ccaacacctg agcgtgctgt ggacaaacct ttcttgttgc ctatcgaaga cgtattctct 360
atctctggcc gtggtacagt agtaactggg cgtgtagagc gcggtatcat ccacgttggt 420
gacgagatcg aaatcgtagg tctgaaagaa acccaaaaaa ccacttgtag cggcggtgaa 480
atgttccgca aactgctgga cgaagggtcaa gctggtgaca acgtaggcgt attgctgctg 540
ggtacaaac gtgaagacgt agagcgtggg caagtattgg ctaaaccagg taccattact 600
cctcacacca aattcaaagc agaagtatac gtactgagca aagaagaggg tggtcgtcac 660
actccattct tcgctaacta ccgtccacaa ttctacttcc gtactactga cgtaactggt 720
gcagttactt tggaagaagg cgtagaaatg gtaatgccag gtgagaacgt aaccattact 780
gtagaactga ttgcgcctat cgctatggaa gaag 814
```

<210> 132
<211> 818
<212> DNA
<213> *Neisseria weaveri* ATCC 51223

```
<400> 132
gccatcttgg tatgttctgc tgetgacggt cctatgccgc aaaccctgta gcacatcctg 60
ttggctcgct aagtaggtgt accctacatc atcgtattca tgaacaaatg cgatattggt 120
gatgatgcag agctgctgga attggtagaa atggaaatcc gtgatctgct gagcagctac 180
gatttccctg gcgatgattg yccaatcgtg caaggttctg ctttgaaagc tttggaagg 240
gatgccgctt acgaagaaaa aatctttgaa ttagctgctg cattggatag ctatattcca 300
acwcctgagc gygctgttga taaaccattc ctggtgccga ttgaagatgt attctcaatt 360
tcaggtcgct gtacagtagt aactggctcg gttagagcgc gtattattca cgtaggcgat 420
gaaattgaaa ttgtaggttt gaaagaracy caaaaaacta cttgtaccgg cgttgaaatg 480
ttccgtaaat tgctggatsa aggtcaggct ggtgataacg taggcgtatt gttgcgtggt 540
accaaactgt aagacgttga gcgtgggtcaa gtattggcta agcctggtwc tattactccg 600
cayaccaaat tcaaagcaga rgtktatgtw ttgagyaagg aagaaggcgg tcgctacatc 660
cggttcttcg ctaactatcg tccgcaattc tatttccgta ctacagacgt taccggtgck 720
gtracttttag aagaaggtgt ggaaatggta atgcctgggt agaaygttgc cattactgtw 780
garytgatyg ctccgattgc katggaagaa ggytgctg 818
```

<210> 133
<211> 836
<212> DNA
<213> *Ochrobactrum anthropi* ATCC 49188

```
<400> 133
cggcgcaatt ctggttggtt cggccgctga cggcccgatg ccgcagaccc gtgagcacat 60
cctgctcgct cgtcaggttg gcgttccggc aatcgctcgtg ttccctgaaca agtgcgacca 120
ggttgacgat gcagaactgc tcgaactggg tgaactggaa gttcgcgaac ttctgtcgaa 180
atacgatttc ccggcgacg aagttccgat catcaagggc tcggctcttg ctgctctgga 240
agattcttcg aaggaaactg gcgaagacgc cgttcgttcg ctgatggccg ctggtgacga 300
ctacattccg accccggaac gtccgatcga ccagccgttc ctgatgccga tcgaagacgt 360
tttctcgatc tcgggcccgtg gtacgggttg gacgggtcgc gttgagcgcg gtatcgtcaa 420
ggttggtgaa gaagttgaaa tcgtcggcat caaggcgacg gcgaagacga cggtaaccgg 480
cgttgaaatg ttccgcaagc tgctcgayca gggccaggct ggcgacaaca tcggcgctct 540
gatccgcccc gttggccgtg aagacgttga acgcggccag gttctctgca agccgggttc 600
```


tgtgaagccg	cacaccaagt	tcaaggcaga	agcctacatt	ctgaccaagg	acgaaggtgg	660
ccgtcatacg	ccgttcttta	cgaactaccg	tccgcagttc	tacttccgca	cgacggacgt	720
gaccggtgtt	gtcacgctgc	cggaaggcac	ggaaatgggt	atgcctggcg	acaacgtcgc	780
tatggacgtc	accctgatcg	tgccgatcgc	catggaagag	aagctccgct	tcgcta	836

<210> 134
 <211> 805
 <212> DNA
 <213> *Pantoea agglomerans* ATCC 27155

<400> 134						
cctggttggt	gctgcgactg	atggcccaat	gccacagacc	cgtgagcaca	tcttgcctgg	60
tcgtcagggt	ggcggttcct	acatcatcgt	gttcctgaac	aagtgtgaca	tggttgatga	120
tgaagagctg	ctggaactgg	tagagatgga	agtacgtgac	ctgctgtcac	agtacgactt	180
cccaggcgat	gacaccccg	tcgttcgtgg	ttctgctctg	aaagcgctgg	aaggcggtcc	240
tgagtgggaa	gcaaaaatcg	ttgagctggc	tgaacacctg	gacaactaca	tcccggatcc	300
agtccgtgcg	atcgacatgc	cgttcctgct	gccaatcgaa	gacgtattct	caatctctgg	360
ccgtggtacc	gttggttaccg	gtcgtgttga	gcgcggcatc	gttaaagtcg	gcgacgaagt	420
tgaaatcgtg	ggtatcaaag	atactgcgaa	atcaacctgt	accggtgttg	agatgttccg	480
taagctgctg	gaccagggtc	aggcaggcga	aaactgtggg	gttctgctgc	gcggtatcaa	540
gcgtgaagac	atccagcgtg	gccaggttct	ggctaagcca	ggctcaatca	agccgcacac	600
ccagttcgag	tcagaagttt	acgttctgtc	taaagacgaa	ggtggccgcc	atactccgtt	660
cttcaaaggc	tatcgtccac	agttctactt	ccgtacaact	gatgtaaccg	gttcagtaga	720
gctgccagaa	ggcgttgaga	tggtcatgcc	aggcgacaac	atcaaaatgg	ttgttaccct	780
gatccacca	atcgcaatgg	acgaa				805

<210> 135
 <211> 825
 <212> DNA
 <213> *Pantoea dispersa* ATCC 14589

<400> 135						
cgcgatccctg	gttggttgctg	cgactgatgg	cccaatgcct	cagacccgtg	agcacatcct	60
gctggggcgt	cagggttgccg	ttccttacat	catcgtgttc	ctgaacaagt	gtgacatggg	120
tgatgacgaa	gagctgctgg	aactgggtga	gatggaagtt	cgcgatctgc	tgtctcagta	180
cgacttccca	ggcgacgata	ccccaatcgt	acgcggttct	gcgctgaaag	cgctggaagg	240
cgacgtgag	tggaagcgca	aagtcgttga	gctggctggg	cacctggata	cttacattcc	300
agatccagta	cgtgctatcg	atctgcggtt	cctgctgcca	atcgaagacg	tattctcaat	360
ctctggccgt	ggtaccgttg	ttaccggtcg	tgttgagcgc	ggcatcgtga	aagtgggcga	420
cgaagtagaa	atcgttggta	tcaaagcgac	tgccaagtct	acctgtaccg	gtgttgaaat	480
gttccgcaaa	ctgctggacc	agggtcaggc	aggcgagaac	tgtggtgttc	tgctgcgcgg	540
tatcaagcgt	gaagagatcc	agcgtggcca	ggttctggct	aagccaggca	ccatcaagcc	600
acacaccaag	ttcgtatcag	aagtgtacgt	actgtctaaa	gacgaaggcg	gccgtcatac	660
tccgttcttc	aaaggctacc	gtccacagtt	ctacttccgt	acyactgatg	tgaccggcam	720
catmgaactg	ccagaaggcg	ttgagatggt	aatgccaggc	gacaacatca	aaatgrccgt	780
tgagctgac	cacccaatcg	cgatggacca	gggtctgcgt	ttcgc		825

<210> 136
 <211> 762
 <212> DNA
 <213> *Pasteurella multocida* NCTC 10322

<400> 136						
cacaaacacg	tgagcacatc	cttttaggtc	gccaagtagg	cgttccttac	atcatcgtat	60
tcttaaacaa	atgcgacatg	gtggatgatg	aagaattatt	agaattagtt	gaaatggaag	120
tcggtgaact	tctttctcaa	tatgatattcc	caggatgatga	tacaccaatc	gtacgtgggt	180
cagcgttaca	agcgttaaag	ggygtagctg	agtgggaaga	gaaaattctt	gagttagcca	240
accacttaga	tacttacatt	ccagagccac	aacgtgcaat	cgaccaaccg	ttccttcttc	300
cgattgaaga	cgtgttctca	atttctgggt	gtggtacagt	agtaacagggt	cgtgttgagc	360
gtggtatcat	ccgtacaggt	gaagagggtg	aaattgttgg	tattaaagcg	acaacgaaga	420
ccacagtaac	aggtgttgag	atgttccgta	aattattaga	cgaaggtcgt	gcgggtgaga	480
acgttggtgc	tttattacgt	ggtactaarc	gtgaagaaat	cgaacgtggg	caagtgttag	540
cgaaaccggg	ttcaatyacg	ccacacactg	attttgaatc	agaagtttac	gtgttatcaa	600

```

aagaagaagg tggtegtcat acaccattct tcaaagggtta ccgtccacag ttctacttcc 660
gtacaacgga cgtaacaggt acaatcgaat taccggaagg tggtgagatg gtgatgcctg 720
gtgataacat caagatgact gtaagtttga ttcacccaat cg 762

```

<210> 137
 <211> 832
 <212> DNA
 <213> *Peptostreptococcus anaerobius* ATCC 27337

```

<400> 137
tgagagctatc ttagttgtat cagcagcgga tggaccaatg ccacaaacaa gagaacacat 60
cttattatca agacaagtag gagtaccata tatcgtagta tatttgaata aagcagatat 120
ggtagaagat gaagaattat tagaattagt agaaatggaa gtaagagaat tactatctga 180
atatggattc ccaggagatg aaattccaat cataacagga tcataccttag gagcattaaa 240
tggaagaacaa aaatggatag atcaaatcat ggcattgatg aaagccgtag atgaatata 300
tccaacaccg gaaagagcag tagatcaacc attccttgatg ccaatcgaag acgtatttac 360
aattacagga agaggaactg tagtaacagg aagagttgaa agaggagttg taaaagtwgg 420
agaagaagtt gaaatcgtag gaatcaaagc gacaacaaag acaacttgta cyggagtaga 480
aatgttccga aaattatttg atcaaggaca agcaggagat aacatcgag ctttattrag 540
aggaaccaag aaagaagatg tagaaagagg acaagtattg gcaaaaccag gaacaattca 600
tcctcatata aacttcagtg gagaagtata tgtattgaca aaagaagaag gaggaagaca 660
tactccattc ttctcaggat acagaccaca attttacttt agaaccacag atattacagg 720
agcagtaaca ttaccagaag gtagtagaat ggtaatgccr ggagataata tcacaatgac 780
agtagaattg attcacccaa ttgcaatgga aacaggatta cgatttgcaa tt 832

```

<210> 138
 <211> 823
 <212> DNA
 <213> *Peptostreptococcus asaccharolyticus* strain LSPQ 2639

```

<400> 138
tagtatgttc agcagcagay ggtccaatgc cacaacaag agaacacatt ctactagcaa 60
gacaagttgg tgtaccaaag atagtagtat tcctaaacaa agaagaccaa gtagacgatc 120
cagaactaat tgaattagta gagatggaaa tcagagacct actatcagaa tatgacttcg 180
ayggagacaa cacaccaatc gtagtaggat cagcattaaa agccctagac gatccagacg 240
gagaatgggg agacaaaatc gtaaaactaa tggaagmagt agacgaatac atcccaacac 300
cagtaagaga tacagaacac ccattcctaa tgccaatcga agacrtattc tcaatyacag 360
gaagaggaac agtagcaaca ggaagagtag acaaggtgt agtaaaagta ggmgaacacag 420
tagaactagt aggttaaca gacgaaagca gacaagtagt agtaacaggt gtagaaatgt 480
ttagaaaaca actagaccta gcagaagcmg gagacaacat tggagcccta ctaagaggag 540
tacaaagaga agaaatccaa agaggacaag tactagcagc accaggaaca atcaaaccac 600
acacaaaatt tgaagcagaa gtatacgtac taacaaaaga agaaggtgga agacacacac 660
cattctttta cggatacaga ccacaattct acttcagaac aacagacgta acaggagaca 720
tccaactagc agacggagta gaaatggtaa tgccaggaga caactcaaca tttacagtaa 780
cactaatcac accaatcgca atggacgaag gactaagatt cgc 823

```

<210> 139
 <211> 832
 <212> DNA
 <213> *Peptostreptococcus prevotii* ATCC 9321

```

<400> 139
ctatcatcgt agtatctgca gcagacggtc caatgcccac acagagagaa cacatcctac 60
tagcaagaca agtaggcgtt ccaaaaatcg cagtattcct aaacaaagaa gaccaagtag 120
acgatccaga actaatcgaa ttagtagaaa tggaaatcag agacctactt tcagaatacg 180
acttcgatgg agacaacgct ccagtagtag taggatctgc tcttaaatac ctagaagaag 240
gcggagaagg cccatggtca gacaaaatcc ttgacctaat ggcacaagta gacgaatact 300
tcgacatccc agaaagagac aacgaccaac cattcctaatt gccagtagaa gacgtaactg 360
caatctcagg acgtggaaca gtagcaacag gaagagttga aagaggaaca ctaaaagttg 420
gtgatacagt agaaatcgta ggactaacag aagatacaaa agaaacagta gtaactggag 480
tagaaatggt ccacaaatcm ctagaccaag cagaatctgg agataacgta ggactactac 540
taagaggagt aacaagagat caaatctcaa gaggacaagt actagcaaaa ccaggwtcag 600
taaaccaca cacagaattc gaaggtcaag tatacgtact aacaaaagaa gaaggtggac 660

```

gtcacacacc	attcttcagt	ggatatagac	cacaattctt	ctttagaaca	acagacgtaa	720
caggagacat	cgaactagaa	gaaggcgtag	aaatggtaat	gccaggagac	aacgcaacat	780
tcaaaatcac	actccaaaaa	ccaatcgctc	tagaagaagg	actaagattc	gc	832

<210> 140
<211> 831
<212> DNA
<213> *Porphyromonas asaccharolytica* ATCC 25260

<400> 140						
cggtgctatc	atcgtagttg	ctgcaactga	tggtcctatg	cctcagacgc	gtgagcacat	60
cctactagca	cgtcagggtca	acgtacctcg	tctagttgtc	tttatgaaca	agtgcgacct	120
tggtgatgac	gaggagatgc	tcgagctcgt	agagatggat	atgcgtgagc	tactaagctt	180
ctatgacttt	gacggcgaca	acactcctgt	catccgtggg	tctgctcttg	gtgctctcaa	240
tggtgagcct	aagtgggtag	agaaggttat	ggagctcatg	gaggctgtag	acacttggat	300
cccactacct	gagcgcgaca	tcgacaagcc	tttccaatg	cctgtagagg	acgtattctc	360
tatcacaggt	cgtggtactg	tcgctactgg	tcgtatcgag	actggtgtcg	ttaagggtcaa	420
cgatgaggtt	cagatcatcg	gtctaggtgc	tgagggttaag	aagagcgtcg	taactggcgt	480
ggaaatgttc	cgcaagatcc	ttgatgagg	tgaagctggg	gataacgtag	gtctcctact	540
ccgtgggtatc	gacaaggacg	agatcaaggc	cggtatgggtc	ctagcacacc	cagggtcagg	600
caagcctcac	gatcacttca	aggctgaggt	ctatatcctg	aagaaggaag	agggtgggtcg	660
tcacacacca	ttccacaaca	agtaccgtcc	tcagttctac	atccgtacgc	tagacgtaac	720
gggcgagatc	acactcccag	agggtgtaga	gatggttatg	cctggtgata	acgtcaccat	780
cgatgtcaag	ctcatctctc	cagtagcttg	tagcgtaggt	ctacgcttcg	c	831

<210> 141
<211> 818
<212> DNA
<213> *Porphyromonas gingivalis* ATCC 33277

<400> 141						
cggtgctata	atcgttgtag	cagctacaga	cggtcctatg	cctcagactc	gagagcacat	60
ccttttggct	cgccaggtaa	acgttcctcg	tctggttggt	ttcatgaaca	aatgtgacat	120
ggtagacgat	gaagagatgc	tcgagcttgt	tgaatggac	atgcgcgaac	tcctttcttt	180
ctacgatttc	gatggtgaca	atacccttat	catccgtggg	tctgctctgg	gcgctttgaa	240
tgtagagcct	cagtgggaag	acaagggtat	ggagcttatg	gaagctgttg	acaactgggt	300
ttccctgcct	gagcgcgata	tcgacaaacc	gttcttgatg	ccggttgaag	acgtgttctc	360
tatcacgggt	cgtggtacgg	tcgctacagg	acgtatcgaa	accggtattg	tgaagaccgg	420
tgacgaagtt	caaatcatcg	gcctcggtgc	agaaggaatg	aagtcggttg	ttacgggtgt	480
tgaatgttc	cgtaagattc	ttgacgaagg	tcaggctggg	gacaacgttg	gtctcctcct	540
gcgtgggtatc	gataaggatc	agatcaaggc	tggtatgggt	atctctcacc	cgggtaagat	600
tactcctcac	aagagattta	aggccgaggt	ttatatcttg	aagaaagaag	aagggtgggtcg	660
ccacactcct	ttccacaaca	aatatcggtc	gcagttctac	atccgtacgc	ttgacgtgac	720
cggtgaaatc	actcttcccg	aaggaacaga	aatggttatg	cccggtgaca	acgtaacgat	780
cactgtagaa	ctcatctacc	cgggtgcatg	taatgtag			818

<210> 142
<211> 830
<212> DNA
<213> *Pragia fontium* ATCC 49100

<400> 142						
cggcgctatt	ctggttggtg	ctgcaactga	tggtcctatg	cctcaaactc	gtgagcacat	60
cctgttaggy	cgccagggtg	gcgtaccata	catcattgtg	ttcctgaaca	agtgtgacat	120
ggttgaygat	gaagagctgt	tagaactggg	tgaatggaa	gttcgtgagc	ttctgtctca	180
gtacgatttc	ccagggtgat	atactccagt	tggtcgtggg	tctgcgtgga	aagcgttrga	240
aggcgaagct	gagtgggaag	ctaaaatcat	tgaattggct	gactccctgg	ayagctacat	300
tcacacagca	gagcgtgcaa	ttgataagcc	gttcctgctg	ccaatcgaag	acgttttctc	360
aatctctggc	cgtggtacag	tagtaaccgg	tcgtgtagag	cgcggtatcg	ttaaagttgg	420
tgaagaagtt	gaaatcgttg	gtatcaaaga	tactgtgaaa	acaacttgta	ctggcggtga	480
aatgttccgt	aarttactgg	atgaaggccg	tgccgggtgag	aacggtgggtg	ttctgtgtcg	540
tggtactaag	cgtgatgaaa	tcgaacgtgg	tcaagtatta	gcaaaaccag	gttcaatcaa	600
cccgcatact	aacttcgtat	cagaagttta	tatcctgagc	aaagatgaag	gtggtcgtca	660

```
tactccattc ttcaaaggct accgtccaca gtttacttc cgtacaactg acgtgaccgg 720
taccatcgaa ctgccagaag gcgtagagat ggtaatgcca ggtgataaca ttcagatgac 780
tgtaactctg attgccccaa tcgcgatgga cgaaggttta cgcttcgcta 830
```

<210> 143
 <211> 821
 <212> DNA
 <213> *Prevotella melaninogenica* ATCC 25845

```
<400> 143
tgggtgctatc ttggtttag ctgctactga tggctctatg cctcagactc gtgagcacgt 60
attgctcgcgt cgtcaggtaa acgtacctcg cttgggttgta ttcttgaaca agtgtgatat 120
ggttgacgat gctgagatgc ttgacctcgt tgagatggag gttcgtgaga tcctcgagca 180
gtacggttat gaggaggata ctctattat tcgtggttct gcactcgggtg ctttgaacgg 240
tggtgagaag tgggtagact ctgtaatgga gctcatggat actggtgaca cttggattga 300
agagccagag cgtgagattg acaagccatt cttgatgcct gttgaggacg tattctctat 360
cacaggtcgt ggtactgtag ctactggctg tatcgagact ggtatctgta aggtagggtga 420
tgaggttcag ttgctcggtc tcggtgagga caagaagtct gttatcactg gtgttgagat 480
gttccgtaag aaccttccaa caggtcaggc tgggtgacaac gtaggctctcc tccttcgtgg 540
tatcgataag gctgaggtta agcgtggat ggttggtttg caccagggtg ctattactcc 600
tcacgatcac ttcaaggcat ctatctatgt attgaagaag gaagagggtg gtcgcatcac 660
tccattcggg aacaagtatc gtccacagtt ctacctcgt acaatggact gtacagggtga 720
aatccacctc ccagagggcg ttgagatggg tatgccaggg gacaacgtag agattgaagt 780
tgtattgatc tataagggtg ctttgaacga gggctctcgt t 821
```

<210> 144
 <211> 827
 <212> DNA
 <213> *Prevotella oralis* ATCC 33269

```
<400> 144
tgggtgctatt cttgtagtag ctgctactga cggctctatg cctcaaactc gtgaacacgt 60
gcttcttgct cgtcagggtga acgtacctcg tttgggtcgt ttcttgaaca agtgcgatat 120
ggttgacgat gaagaaatgc ttgagctcgt agaaatggag cttcatgaac ttctcgagca 180
gtatgaatat gaggaggata ctctattgt tcgtggttcg gcacttggcg ctctgaatgg 240
agtagagaag tgggttgaca gcgtgatgaa gttgatggat accgttgatg aatggataca 300
ggaaccaccg cgtgatcttg ataagccttt cttgatgccg gtagaggatg tttttctat 360
tactggctcg ggaacgggtg ttacaggccg tattgaaact ggtaagggtta aggtgggcca 420
tgaagttcaa cttcttggtc tcggtgaaga taagaagtcc gttgtgacag gcgttgagat 480
gttccgtaag attcttgacg aaggtgaagc tgggtgataat gtaggcttgc tgcttcgtgg 540
tatcgataag acggaagtaa agcgtggat ggttgtcgt catccggggg ctattactcc 600
tcacgatcat ttcaaggctt cagtttacgt attgaagaaa gaagaaggcg gtcgccatac 660
tccgtttggg amcaagtatc gtccacagtt ctatcttcgt accatggact gtactgggtga 720
aattactctt ccggaaggag ttgagatggg aatgccgggt gataacgtcg aaattgaagt 780
taagttgatc tatccggtag ctttgaacga gggacttcgt ttcgcta 827
```

<210> 145
 <211> 833
 <212> DNA
 <213> *Propionibacterium acnes* ATCC 6919

```
<400> 145
cggcgccatc ctcggtggtg ctgctaccga cggccccgat cctcagactc gcgagcacgt 60
tctgctcgct cgtcagggtg gcgtgcccgc catcgctcgt gccctcaaca agtgcgacat 120
ggttgacgat gaggagctca ttgagctcgt cgagatggag gtccgcgagc tgctgacctc 180
gcaggagttc gacggcgaca actgccctgt cgttcgcata tccgccttcc aggccctcca 240
gggtgatgag aagtggaccc agtcgatcct cgacctcatg gacgccgtgg acgagtacat 300
cccgcagcct gagcgcgatc tcgacaagcc cttccttatg ccgatcgagg acgtcttcac 360
catcacccgc cgtggcaccg ttgtcaccgg tcgtgtcgag cgcggcgtcg tcaagactgg 420
cgaagaggtc gagatcgctg gtatccacga gaagaccag aagaccaccg ttaccgggtg 480
cgagatgttc cgcaagatcc tcgacgaggg ccgcgctggt gagaacgtcg gcgttctgct 540
ccgtggcacc aagaaggagg atgtcgttcg cggcatggtc ctctccaagc ctggttccac 600
caccctccac accgacttcg agggccagggt ctacgtcctc aagaaggatg aggggtggcg 660
```

```
ccacaagcgcg ttcttctccc actacagccc ccagttctac ttccgtacca cggacgtgac 720
tggcactggtt gagctccccg agggcaccga gatgggtcatg cctggcgaca acaccgacat 780
gactgtgcac ctgattcacc cggttgccat ggaggatcag ctcaagttcg cta 833
```

<210> 146
<211> 745
<212> DNA
<213> *Proteus mirabilis* ATCC 35659

```
<400> 146
cacaaactcg tgagcacatc ctgttaggtc gtcaggttgg tgttccttac atcatcgtat 60
tcctgaacaa atgtgacatg gtagatgatg aagagctggt agaattagtt gaaatggaag 120
ttcgtgaact tctgtctcaa tacgatttcc caggtgatga cactccagta atccgtgggt 180
cagcgtgtaa agcactggaa ggcggaagcag agtgggaagc aaaaattggt gaattagcag 240
aagcactgga ttcttatatc ccagagccag agcgtgcaat tgacaaacca ttctgtttac 300
caatcgaaga tgtattctca atctcaggcc gtggtacagt agttactggt cgtgtagagc 360
gtggtatcat caaagtaggt gatgaagttg agattgttgg tatcaaagaa accgccaaaa 420
caacttgtac tggcgttgaa atgttccgta aattacttga cgaaggtcgt gcaggtgaga 480
acgtaggtgt tctgctgcgt ggtacaaaaa gtgaagaaat cgaacgtgga caagtactgg 540
craaaccagg ctcaatcaac ccacacaaca aatttgaatc agaagtttat attctgagca 600
aagatgaagg tggctgctac actccattct tcaaaggcta ccgtccacag ttctacttcc 660
gtacaactga cgtaactggt actatcgaat taccagaagg cgtagaaatg gtaatgccag 720
gcgacaacgt gaacatgatc gttga 745
```

<210> 147
<211> 829
<212> DNA
<213> *Proteus penneri* ATCC 33519

```
<400> 147
ggagctatcc tgggttgttg tgcgacagat ggcccaatgc cacaaactcg tgagcacatc 60
ctgttaggtc gtcaggttgg tgttccttac atcatcgtat tcctgaacaa atgtgacatg 120
gtagatgatg aagagttact ggaattagtm gaaatggaag ttcgtgaact tctgtctcag 180
tacgatttcc caggtgatga cactccagta atccgtgggt cagcgtgtaa agcactggaa 240
ggcggaagcag agtgggaagc aaaaattggt gaattagcag aagcactgga ttcatacatc 300
ccagarccag agcgtgcaat tgacaaacca ttctgtttac caattgaaga cgtattctca 360
atttcaggcc gtggtacagt agtaacaggt cgtgttgagc gtggcgtaat caaagttggt 420
gaagaagttg aaatcgttgg tattaacca acagcgaaaa caacttgta tggcgttgaa 480
atgttccgta aattacttga cgaaggtcgt gcaggtgaga acgtaggtgt tcttctgcgt 540
ggtactaaac gtgaagaaat cgaacgtgga caagtactgg cgaaaccagg ttcaatcaac 600
ccacacacta aatttgaatc agaagtttat attctgagca aagatgaagg tggctgctac 660
actccattct tcaaaggcta ccgtccacag ttctacttcc gtacaactga cgtaactggt 720
actatcgaat taccagaagg cgtagaaatg gtaatgccag gtgacaacat caacatgatc 780
gttgaactga ttcacccaat cgcgatggac gacggtttac gtttcgcta 829
```

<210> 148
<211> 824
<212> DNA
<213> *Proteus vulgaris* ATCC 13315

```
<400> 148
cggagctatt ctggttgttg ctgcgactga tggcccaatg ccacaaactc gtgagcacat 60
cctgttaggt cgccaggttg gtgtacctta catcatcgta ttctgaaca aatgtgacat 120
ggttgatgat gaagaactgc tggaattagt agaaatggaa gttcgtgaac ttctgtctca 180
gtacgatttc ccaggtgatg acactccagt aatccgtggg tcagcgtgta aagcactgga 240
aggcgaagct gagtgggaag caaaaattgt tgaattagca gaagcactgg attcttacat 300
cccagaacca gagcgtgcaa ttgacaaacc attcctgctg cctatcgaag acgtattctc 360
aatctctggt cgtggtacag tagtaacagg ccgtgtagag cgtgggtgtt ttaaagttgg 420
tgaagaagtt gagattgttg gtattaaaga cacagttaaa acaacttgta ctggcgttga 480
aatgttccgt aaattacttg acgaaggtcg tcaggtgag aacgtaggtg ttcttctgcg 540
tggactaaaa cgtgaagaaa tccaactggg tcaagttact gctaaaccag gttcaatcaa 600
gccacacact aaattcgaat cagaagttta tatcctgagc aaagatgaag gtggctgctca 660
cactccattc ttcaaaggtt accgtccaca gttctacttc cgtacaactg acgtaactgg 720
```

tactatcgaa ttaccagaag gcgtagaaat ggtaatgcc a ggtgacaaca tcaacatgat 780
cggtgaactg attcacccta tcgcgtagga cgacgggtta cgtt 824

<210> 149
<211> 745
<212> DNA
<213> Providencia alcalifaciens ATCC 9886

<400> 149
cacaaactcg tgagcacatc ctggttaggtc gccaaagtagg tgttccttac atcatcgttt 60
tcctgaacaa atgtgacatg gtagacgacg aagaactgtt agaattagtt gaaatggaag 120
ttcgtgaact tctgtctcag tacgatttcc caggcgatga cactccagtt gttcgcgggt 180
cagcactgaa agcgcgtggaa ggcaaccag agtggaagc aaaaattgtt gaattagcag 240
gttacctgga ttcttacatc ccagaaccag agcgtgcaat tgacaagcca ttctgctgc 300
caatcgaaga cgtattctca atctctggtc gtggtacagt agtaacaggc cgtggtgagc 360
gtggtatcat caaagttggt gaagaagttg aaatcgttgg tattcaagcg actgcgaaaa 420
caacttgtag tggcggtgaa atgttccgta aactgctgga tgaaggctcg gcgggtgaga 480
acgttggtgt tctgctgctg ggtactaaac gtgaagaaat tcaacgtggt caagtactgg 540
ctaaaccagg ttcaatcaag ccacacactc aattcgaatc agaagtatat attctgagca 600
aagatgaagg tggctgctat actccattct tcaaaggcta ccgtccacag ttctacttcc 660
gtacaactga cgtaaccggt actatcgaac tgccagaagg cgtagagatg gtaatgccag 720
gcgacaacat caacatgatc gtgac 745

<210> 150
<211> 830
<212> DNA
<213> Providencia rettgeri ATCC 9250

<400> 150
cggtgcaatc ctggttgttg ctgcgactga tggcccaatg ccacaaactc gtgagcacat 60
cctgttaggy cgccaagtag gtgtwcctta catcatcggt ttctgaaca aatgtgacat 120
ggtagacgac gaagaactgt tagaattagt tgaaatggaa gttcgtgaac ttctgtctca 180
atacgatttc ccaggcgacg acactccagt tgtccgtggt tcagctctga aagcgtgga 240
aggcaaccga gagtggaag cgaaaattgt tgaattagca ggctacttgg attcttacat 300
cccagaacca gagcgtgcaa ttgacaaacc attcctgctg ccaatcgaag acgtattctc 360
aatctctggt cgtggtacag tagtaacagg ccgtggttag cgtggtatca tcaaagttgg 420
tgaagaagtt gaaatcggtg gtatccaaga cacgggttaa acaacttgta ctggcggtga 480
aatgttccgt aaactgctgg acgaaggctg tgcgggtgag aacggttggt ttctgctgcg 540
tggtactaaa cgtgaagaaa ttcaacgtgg tcaagtactg gcaaaaccag gttcaatcaa 600
gccacacact aaattcgaat cagaagtcta tattctgagc aaagatgaag gtggtcgtca 660
cactccattc ttcaaagggt accgtccaca gttctacttc cgtacaactg acgtaacagg 720
tactatcgaa ctgccagaag gcgtagagat ggtaatgcc a ggtgataaca tcaacatgat 780
cgttaccctg atccacccaa tcgcgatgga cgacgggtta cgtttcgcaa 830

<210> 151
<211> 826
<212> DNA
<213> Providencia rustigianii ATCC 33673

<400> 151
cggtgcaatc ctggttgttg ctgcgactga tggcccaatg ccacaaactc gtgagcacat 60
cctgttaggt cgccaagtag gtgttcctta catcatcggt ttctgaaca aatgtgacat 120
ggttgacgac gaagaactgt tagaattagt tgaaatggaa gttcgtgaac ttctgtctca 180
gtacgatttc ccaggcgacg acactccagt tgttcgyggt tcagcactga aagcgtgga 240
aggatatccct gagtggaag cgaaaattgt tgaattagcc ggttacctgg acagctacat 300
cccagaacca gagcgcgcaa ttgaccgtcc attcctgctg ccaatcgaag acgtattctc 360
aatctctggt cgtggtacag tagtaacagg scgtggttag cgtggtatcg ttaaagttgg 420
tgaagaagtt gaaatcggtg gtatccaaga cacrgttaa acaacttgta ctggcggtga 480
aatgttccgt aaactgcttg acgaaggctg tgcgtggtgag aacggttggt ttttactgcg 540
tggtactaa cgtgaagaaa ttcaacgtgg tcaagtactg gctaaaaccag gttcaatcaa 600
gccacacact acttttgaat cagaagttta tattctgagc aaagatgaag gtggtcgtca 660
tactccattc ttcaaagggt accgtccaca gttctacttc cgtacaactg acgtaaccgg 720
tactatcgaa ctgccagaag gcgtagagat ggtaatgcc a ggcgacaaca tcaacatgat 780

cgtgacactg attcacccaa tcgcgatgga tgatgggttta cgtttc

826

<210> 152

<211> 830

<212> DNA

<213> *Providencia stuartii* ATCC 33672

<400> 152

cgggtgcaatc	ctagttgttg	cggcaacaga	tggcccaatg	ccacaaactc	gtgagcacat	60
cctgttaggt	cgtcagggtg	gcgttcctta	catcatcgtg	ttcctgaaca	aatgtgacat	120
ggtagacgac	gaagagctgc	tggaactggt	tgaaatggaa	gttcgtgaac	ttctgtctca	180
atacgatttc	ccagggtgatg	acactccagt	tatccgtggt	tcagcgctga	aagcgttgga	240
aggcaaccca	gagtgggaag	cgaaaatcgt	tgaactagca	gaagcactgg	acagctacat	300
cccagagcca	gagcgtgcaa	ttgacaagcc	attcctgctg	ccaatcgaag	acgtattctc	360
aatctcaggt	cgtggtacag	tagtcacagg	ccgtgttgag	cgtggtatca	tcaaagttgg	420
tgaagaagtt	gaaatcgtag	gtatcaaaga	gactgcgaaa	accacttgta	ctggcggtga	480
aatgttccgt	aaactgctgg	acgaaggccg	tcgagggtgag	aacgtagggtg	ttctgctgcg	540
tggtactaag	cgtgaagaaa	tcgaacgtgg	tcaagttctg	gcgaaaccag	gttcaatcaa	600
gccacacaca	actttcgaat	cagaagttta	tattctgagc	aaagatgaag	gtgggtcgta	660
cacgcatttc	ttcaaaggyt	accgtccaca	gttctacttc	cgtacaactg	acgtaacagg	720
tactatcgaa	ctgccagaag	gcgtagagat	ggtaatgcca	ggcgacaacg	tgaacatgaa	780
agtaactctg	attcacccaa	tcgcgatgga	cgatgggttg	cgtttcgcaa		830

<210> 153

<211> 827

<212> DNA

<213> *Pseudomonas aeruginosa* ATCC 35554

<400> 153

cctgggtttgc	tcggctgccg	acggccccat	gccgcagacc	cgcgagcaca	tcctgctgtc	60
ccgccaggta	ggcgttccct	acatcgctcg	gttcctgaac	aaagccgaca	tggtcgacga	120
cgccgagctg	ctggaactgg	tcgagatgga	agttcgcgat	ctgctgaaca	cctacgactt	180
cccgggcgac	gacactccga	tcatcatcgg	ttccgcgctg	atggcgctgg	aaggcaagga	240
tgacaacggc	atcggcgtaa	gcgcctgca	gaagctggta	gagaccctgg	actcctacat	300
tccggagccg	gttcgtgcca	tcgaccagcc	gttcctcatg	ccgatcgaag	acgtgttctc	360
gatctccggt	cgcggtaccg	tggtaaaccg	tcgtgtagag	cgcggcacat	tcaaggtcca	420
ggaagaagtg	gaaatcgctg	gcatacaagg	gaccaccaag	accacctgca	cgggcggtga	480
aatgtttccg	aagctgctcg	acgaaggctg	tcgtgggtgag	aacgttggtg	tcctgctgcg	540
tgccaccaag	cgtgaagacg	tagagcgtgg	ccaggtaactg	gccaaagccg	gcaccatcaa	600
gccgcacacc	aagttcgagt	gcgaagtgtg	cgtgctgtcc	aaggagaag	gtgggtcgta	660
caccccggtt	ttcaagggtc	accgtccgca	gttctacttc	cgtaccackg	acgtgaccgg	720
tamctgcgag	ctgccggaag	gcgtagagat	ggtaatgccg	ggcgacaaca	tcaagatggg	780
tgtcacccctg	atcgctccga	tcgccatgga	agatggctgc	gttcgcg		827

<210> 154

<211> 841

<212> DNA

<213> *Pseudomonas fluorescens* ATCC 13525

<400> 154

cggcgcaatc	ctgggtttgct	cggccgctga	tggtccgatg	ccacaaacc	gtgaacacat	60
cctgctgtcc	cgtcagggtt	gcgttccgta	catcgtgggt	tacctgaaca	aggctgacct	120
ggtagacgac	gctgagctgc	tggaactggt	tgagatggaa	gtgcgcgac	tgctgagcac	180
ttacgacttc	ccaggcgacg	acactccgat	catcatcgg	tcgtgctgta	tggtctctgga	240
aggcaaagac	gacaacgaaa	tgggcaccac	gtccgttcgt	aaactgggtg	aaactctgga	300
cagctacatc	ccagatccag	ttcgtgttat	cgacaagccg	ttcctgatgc	caatcgaaga	360
cgtgtttctc	atctccgggt	gcggtactgt	tgtgactgg	cgtatcgagc	gcggtatcgt	420
taaggttcaa	gatccactgg	aaatcgttgg	tctgcgtgac	actaccgtca	ccacctgcac	480
cgggtgttga	atgttccgta	agctgctcga	cgaaggctcg	gctggcgaga	actgcggcgt	540
tctgctgcgt	ggtaaccaag	gtgacgacgt	tgagcgtggc	caggttctgg	ttaagccagg	600
ttcgggttaag	ccgcacacca	agttcgaagc	tgaagtctac	gtactgagca	aagaagaagg	660
cggtcgtcac	actccgttct	tcaaaggcta	ccgtccacag	ttctacttcc	gtactactga	720
cgtgactgg	aactgcgagc	tgccggaagg	cgttgaaatg	gttatgccag	gcgacaacat	780

caaaatgggtt gttaccctga tcaaaacccat cgcaatggaa gacgggtctgc gtttcgctat 840
t 841

<210> 155

<211> 841

<212> DNA

<213> *Pseudomonas stutzeri* ATCC 17588

<400> 155

cgggcgagatc	ctgggtctgct	cggtctgctga	cgcccccatg	ccgcagactc	gcgagcacat	60
cctgctgtcc	cgtcagggttg	gtgttccgta	catcgctcgtg	ttcctgaaca	aggccgacat	120
ggttgatgac	gccgagctgc	tcgagctggg	cgagatggaa	gttcgygacc	tgctgtcgac	180
ctacgacttc	ccgggtgayg	acactccgat	catcatcggc	tccgcgctga	tggcgctgaa	240
cggcgaagac	gacaacgagc	tcggcaccac	tcgggtgaag	aagctggctc	agaccctgga	300
cagctacatt	cccagagccgg	ttcgtgccat	cgacaagccg	ttcctgatgc	cgatcgaaga	360
cgtgttctcg	atctccggtc	gcggcacsct	ggtaaccggg	cgcgtagagc	gcggcatcgt	420
caaggttcag	gaagagatcg	agatcgctcg	tctgcgtccg	accaccaaga	ctacctgcac	480
cggcggttgag	atgttccgca	agctgctcga	ygarggtcgt	gctggcgaga	actgcggygt	540
gctgctgctg	ggcaccaagc	gtgacgaagt	ggagcgtggg	caggttctgg	ccaagccggg	600
caccatcaag	ccgcacacca	agttcgaagc	ggaagtgtac	gtgctgtcca	aggaagaagg	660
tggtcgctcac	accccggttct	tyaagggtca	ccgtccckcag	ttctacttcc	gtaccactga	720
ygtgacyggw	tcgtgcgarc	tgccggaagg	cgctcgagatg	gtaatgccgg	gcgacaacgt	780
gaagatgggt	gtcaccctga	tcaagccgat	cgccatggaa	gacggcctgc	gcttcgcgat	840
t						841

<210> 156

<211> 833

<212> DNA

<213> *Psychrobacter phenylpyruvicus* ATCC 23333

<400> 156

gctattctag	tagtatcagc	aactgacggg	ccaatgccac	aaacacgtga	gcacattcta	60
ttatcacgtc	agggttggtg	accatacatc	atcgatttca	tgaacaaatg	tgacatggta	120
gatgacgaag	agttactaga	gctagtagaa	atggaaagtgc	gtgaattact	ttcagactac	180
gacttcccag	gtgatgacac	tccaatcatc	aaagggttcag	ctttagaagc	gttaaattggg	240
aacgacggta	agtacgggtg	gccagcagtt	atcgaactac	taaacactct	agacacttac	300
attccagagc	cagagcgtga	catcgataag	ccatttcctaa	tgccaatcga	agacgtattc	360
tcaatctcag	gtcgtgggtac	agtagtaaca	ggcgtgtgtg	aattctgggtat	catcaaagtt	420
gggtgacgaaa	tcgaaatcgt	tggtatcaaa	gacacagtta	aaacaacttg	tactgggtatc	480
gagatgttcc	gtaagttact	agacgaaggt	cgtgctgggtg	agaactgtgg	tgtactatta	540
cgtgggtacta	agcgtgaaga	cgtacaacgt	ggtcaagtac	ttgctaagcc	agggttcaatc	600
actccacaca	ccaacttcga	cgcagaagta	tacgtactat	caaaagaaga	agggtggctcg	660
cacactccat	tcttaaatgg	ttaccgtcca	cagttctact	tccgtactac	tgacgtaaca	720
gggtgcaatca	cgttacaaga	aggtagttaa	atggtaaatgc	caggcgataa	cggttgagatg	780
agcgtagagc	taatccaccc	aatcgctagg	acaaagggtt	acgtttcgcga	atc	833

<210> 157

<211> 825

<212> DNA

<213> *Rahnella aquatilis* ATCC 33071

<400> 157

ggcgctatcc	tggttgttgc	tgcaactgac	ggccctatgc	ctcagactcg	tgagcacatc	60
ctgctgggtc	gccagggttg	cgttccatcc	atgatcgtgt	tcatgaacaa	atgcgacatg	120
gtagatgacg	aagagctgct	ggaactggta	gaaatgggaag	ttcgcgaact	tctgtctgct	180
tacgaattcc	caggcgacga	catcccggtc	atcaaagggt	cagcgctgaa	agcactggaa	240
ggcgatgcta	cttgggaagc	gaaaatcatc	gaactggcag	aagcactgga	cagctacatt	300
ccattgccag	agcgtgctat	cgataagcca	ttcctgctgc	caatcgaaga	cgtattctcc	360
atctccggtc	gtggtacagt	ggttaccggg	cgtgtagagc	gcgggtatcgt	taaagtgggc	420
gaagaagttg	aaatcgctcg	tatcaaggac	actggttaagt	ctacttgtag	tggcggtgaa	480
atgttccgca	aactgctgga	cgaaggccgt	cggggacgaga	acgtgggtgt	tctgctgcgt	540
ggatatcaagc	gtgaagacat	cgaacgtggg	cagggttctgg	ctaaaccagg	ttcaatcaaa	600
ccacacacca	agtttgattc	cgaagtgtac	atcctgagca	aagatgaagg	tggtcgtcac	660

actccattct tcaaaggcta cgcgccacag ttctacttcc gtacaactga cgtgaccggt 720
actatcgaa tgccagaagg cgttgagatg gttatgcctg gtgacaacgt gaacatgggt 780
gttaccctga tccaccaaat cgcgatggat gacggctctgc gtttc 825

<210> 158

<211> 830

<212> DNA

<213> *Salmonella choleraesuis* subsp. *arizonae* ATCC 13314

<400> 158

cggcgcgatc ctgggttggtg ctgcgactga cggccccgatg ccgcagaccc gtgagcacat 60
cctgctgggc cgtcaggtag gcgttccgta catcatcgtg ttctgaaca aatgcgacat 120
gggtgatgac gaagagctgc tggaaactgg tgaaatggaa gtctcgtgaa ttctgtctca 180
gtacgacttc ccgggcgacg atacgccgat cgttcgtggg tctgctctga aagcgctgga 240
aggcgacgca gagtgggaag cgaaaatcat cgaactggct ggcttcctgg actcttacat 300
cccggaacca gagcgtgcga ttgacaagcc gttcctgctg ccgatcgaag acgtattctc 360
catctccggt cgtggtagcg ttgttaccgg tctgttagaa ccggtatca tcaaagtggg 420
cgaagaagtt gaaatcgttg gtatcaaaga gactcagaag tctacctgta ctggcggtga 480
aatgttccgc aaactgctgg acgaaggccg tgccggtgag aacgtagggt ttctgctgcg 540
tggtatcaaa cgtgaagaaa tcgaacgtgg tcaggtagtg gctaagccgg gcaccatcaa 600
gccgcacacc aagttcgaat ctgaagtgtg cattctgtcc aaagatgaag gcggccgtca 660
tactccgttc ttcaaaggct accgtccgca gttctacttc cgtactactg acgtgactgg 720
caccatcgaa ctgccggaag gcgtggagat ggtaatgccg ggcgacaaca tcaaaatggg 780
tggtaccctg atccaccgca tcgcgatgga cgacggctctg cgtttcgcaa 830

<210> 159

<211> 832

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 7001

<400> 159

cggcgcgatc ctgggttggtg ctgcgactga cggycgatg ccgcagaccc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttccgta catcatcgtg ttctgaaca aatgcgacat 120
gggtgatgac gaagagctgc tggaaactgg tgaaatggaa gtctcgtgaa ttctgtctca 180
gtacgacttc ccgggcgacg acacgccgat cgttcgtggg tctgctctga aagcgctgga 240
agggtgacgca gagtgggaag cgaaaatcat cgaactggct ggcttcctgg attcttacat 300
tccggaacca gagcgtgcga ttgacaagcc gttcctgctg ccgatcgaag acgtattctc 360
catctccggt cgtggtagcg ttgttaccgg tctgttagag ccggtatca tcaaagtggg 420
ygaagaagtt gaaatcgttg gtatcaaaga gactcagaag tctacctgta ctggcggtga 480
aatgttccgc aaactgctgg acgaaggccg tgccggtgag aacgtagggt ttctgctgcg 540
tggtatcaaa cgtgaagaaa tcgaacgtgg tcaggtagtg gctaagccgg gcaccatcaa 600
gccgcacacc aagttcgaat ctgaagtgtg cattctgtcc aaagatgaag gcggccgtca 660
tactccgttc ttcaaaggct accgtccgca gttctacttc cgtactactg acgtgactgg 720
caccatcgaa ctgccggaag gcgtagagat ggtaatgccg ggcgacaaca tcaaaatggg 780
tggtaccctg atccaccgca tcgcaatgga cgacggctctg cgtttcgcaa 832

<210> 160

<211> 807

<212> DNA

<213> *Salmonella choleraesuis* subsp. *diarizonae* ATCC 43973

<400> 160

cctgggtggt gctgcgactg acggccccgat gccgcagacc cgtgagcaca tcctgctggg 60
tcgtcaggta ggcgttccgt acattatcgt gttcctgaac aaatgcgaca tggttgatga 120
cgaagagctg ctggaactgg tagaaatgga agttcgtgaa ctctgtctc agtacgactt 180
cccgggcgac gacacgccaa tcgttcgtgg ttctgctctg aaagcgctgg aaggcgacgc 240
agagtgggaa gcgaaaatca tcgaactggc tggttccctg gattcttaca tcccgggaacc 300
agagcgtgcg attgacaagc cgttcctgct gccgatcgaa gacgtattct catctccgg 360
tcgtggtagc gttgttaccg tcgtgttaga gcgcggtatc atcaaagtgg gcgaagaagt 420
tgaaatcggt ggtatcaaag agactcagaa gtctacctgt actggcggtg aaatgttccg 480
caartcgtg gacgaaggcc gtgcwgggtg gaacgtagggt gttctgctgc gtggatcaa 540
acgtgaagaa atcgaaacgtg gtcaggtagt ggctaagccg ggaccatca agccgcacac 600
caagttcgaa tctgaagtgt atattctgtc caaagatgaa ggccggccgtc atactccgtt 660

```

cttcaaaggc taccgtccgc agttctactt ccgtaccact gacgtgactg gcaccatcga 720
actgccggaa ggcgtggaga tggtaatgcc gggcgacaac atcaaaatgg ttgttaccct 780
gatccaccgg atcgcgatgg acgacgg 807

```

<210> 161
 <211> 832
 <212> DNA
 <213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 8326

```

<400> 161
cggcgcgac ctggttgttg ctgcgactga cggcccgatg ccgcagaccc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttccgta catcatcgtg ttcctgaaca aatgcgacat 120
ggttgatgac gaagagctgc tggaaactgg tgaatggaa gttcgtgaac ttctgtctca 180
gtacgacttc ccgggcgacg acactccgat cgttcgtggg tctgctctga aagcgtgga 240
aggcgacgca gagtgggaag cgaatcatc cgaactggct ggcttcctgg attcttacct 300
cccgaacca gagcgtgcga ttgacaagcc gttcctgctg ccgatcgaag acgtattctc 360
catctccggg cgtgggtaccg ttgttaccgg tcgtgtagaa cgcggtatca tcaaagtggg 420
cgaagaagtt gaaatcgttg gtatcaaaga gactcagaag tctacctgta ctggcggtta 480
aatgttccgc aaactgctgg acgaaggccg tgccggtgag aacgtagggtg tctgctgctg 540
tgggtatcaa cgtgaagaaa tcgaacgtgg tcaggctactg gctaagccgg gcaccatcaa 600
gccgcacacc aagttcgaat ctgaagtgtg cattctgtcc aaagatgaag gcggccgtca 660
yactccgttc ttcaaaggct accgtccgca gttctacttc cgtactactg acgtgactgg 720
caccatcgaa ttgccggaag gcgtagagat ggtaatgccg ggcgacaaca tcaaaatggt 780
tgttaccctg atccaccgca tcgcgatgga cgacgggtctg cgtttcgcaa tc 832

```

<210> 162
 <211> 807
 <212> DNA
 <213> *Salmonella choleraesuis* subsp. *houtenae* ATCC 43974

```

<400> 162
cctggttggt gctgcgactg acggcccgat gccgcagacc cgtgagcaca tcctgctggg 60
tcgtcaggta ggcgttccgt acatcatcgt gttcctgaac aaatgcgaca tggttgatga 120
cgaagagctg ctggaactgg tagaaatgga agttcgtgaa cttctgtctc agtacgattt 180
cccggcgac gacacgccga tcgtgcgtgg ttctgctctg aaagcgtgga aaggcgacgc 240
agaatgggaa gcgaaaatca tcgaactggc tggctacctg gattcttaca tcccggaacc 300
agagcgtgct attgacaaac cgttcctgct gccgatcgaa gacgtattct ctatctccgg 360
tcgtggtacc gttgttaccg gtcgtgtaga gcgcggtatc atcaaagtgg gcgaagaagt 420
tgaaatcggt ggtatcaaag agactcagaa gtcgacctgt actggcggtg aaatgttccg 480
caaactgctg gacgaaggcc gtgctggcga gaacgtagggt gttctgctgc gtggtatcaa 540
acgtgaagaa atcgaacgtg gtcagggtact ggctaagccg ggcaccatca agccgcacac 600
caagttcgaa tctgaagtgt acattctgtc caaagatgaa ggccggccgtc atactccgtt 660
cttcaaaggc taccgtccgc aattctactt ccgtactgact gacgtgactg gcaccatcga 720
actgccggaa ggcgtggaga tggtaatgcc gggcgacaac atcaaaatgg ttgttaccct 780
gatccaccgg atcgcgatgg acgacgg 807

```

<210> 163
 <211> 827
 <212> DNA
 <213> *Salmonella choleraesuis* subsp. *indica* ATCC 43976

```

<400> 163
cgcgatcctg gttgttgctg cgactgacgg cccgatgccg cagaccctgt agcacatcct 60
gctgggtcgt caggtaggcg ttccgtacat catcgtgttc ctgaacaaat gcgacatggt 120
tgatgacgaa gagctgctgg aactggttga aatggaagtt cgtgaacttc tgtctcagta 180
cgacttcccg ggtgacgaca cgcgatcgt cgctgggtct gctctgaaag cgctggaagg 240
cgacgcagag tgggaagcga aaatcatcga actggctggc ttcttggaat cttacattcc 300
ggaaccagag cgtgcgattg acaagccgtt cctgctgccg atcgaagacg tattctccat 360
ctccggtcgt ggtacygttg ttaccggtcg ttagagagcg ggtatcatca aagtgggcga 420
agaagtgtga atcgttggtg tcaaagagac tcagaagtct acctgtactg gcgttgaaat 480
gttccgcaaa ctgctggacg aaggccgtgc cggtgagaac gtaggtgttc tgctgcgtgg 540
tatcaaacgt gaagaaatcg aacgtggtca ggtactggct aagccgggca ccatcaagcc 600
gcacaccaag ttcgaatctg aagtgtacat tctgtccaaa gatgaaggcg gccgtcatatc 660

```

```
tccgtttcttc aaaggctacc gtccgcagtt ctacttccgt actactgacg tgactggcac 720
catcgaactg ccggaaggcg tagagatggg aatgccgggc gacaacatca aaatggttgt 780
taccctgata catccgatcg cratggacga cggctctgctg ttcgcaa 827
```

```
<210> 164
<211> 807
<212> DNA
<213> Salmonella choleraesuis subsp. salamae ATCC 43972
```

```
<400> 164
cctggttggtt gctgcgactg acggcccgat gccgcagacc cgtgagcaca tcctgctggg 60
tcgtcaggta ggcgttccgt acatcatcgt gtccctgaac aaatgcgaca tgggtgatga 120
cgaagagctg ctggaactgg tagaaatgga agttcgtgaa cttctgtctc agtacgactt 180
cccgggagac gacacgccga tcgtgcgtgg ttccgctctg aaagcgctgg aaggcgamgc 240
tgagtgggaa gmgaaaaatca tcgaactggc tggctwcctg gattcttaca ttccggaacc 300
agagcgtgag attgacaagc cgttcctgct gccgatcgaa gacgtattct ccatctccgg 360
tcgtggtacc gttgttaccg gtcgtgtaga gcgcggatc atcaaagtgg gcgaagaagt 420
tgaaatcggt ggtatcaaag agactcagaa gtctacctgt actggcgctg aaatggtccg 480
caaactgctg gacgaaggcc gtgccggtga gaacgtagg gttctgctgc gtggtatcaa 540
acgtgaagaa atcgaacgtg gtcaggtag ggctaagccg ggcaccatca agccgcacac 600
caagttcgaa tctgaagtgt acattctgtc caaagatgaa ggcggccgct atactccgtt 660
cttcaaaggc taccgtccgc agttctactt ccgtaccact gacgtgactg gcaccatcga 720
actgccggaa ggcgtggaga tggtaatgcc gggcgacaac atcaaatggt ttgttaccct 780
gatccacccg atcgcgatgg acgacgg 807
```

```
<210> 165
<211> 832
<212> DNA
<213> Salmonella choleraesuis subsp. choleraesuis ATCC 10749
```

```
<220>
<221> misc_feature
<222> (514)..(514)
<223> n represents nucleotide
```

```
<400> 165
cggcgcgatc ctggttggtg ctgcgactga cggcccgatg ccgcagaccc gtgagcacat 60
cctgctgggt cgtcaggtag gcgttccgta catcatcgtg ttctgaaca aatgcgacat 120
ggttgatgac gaagagctgc tggaaactgg tgaaatggaa gtccgtgaac ttctgtctca 180
gtacgacttc ccggcgagac acacgccgat cgttcgtggg tctgctctga aagcgctgga 240
aggcgacgca gagtgggaag cgaataatcat cgaactgggt ggcttcctgg attcttacct 300
cccgaacca gagcgtgcga ttgacaagcc gttcctgctg ccgatcgaag acgtattctc 360
catctccggt cgtggtaccg ttgttaccgg tcgtgtagaa gcgcggatca tcaaagtggg 420
cgaagaagtt gaaatcggtg gtatcaaaga gactcagaag tctacctgta ctggcggtga 480
aatgttccgc aaactgctgg acgaaggccg tgcnggtgag aacgtagggt ttctgctgct 540
tggtatcaaa cgtgaagaaa tcgaacgtgg tcaggtagtg gctaagccgg gcaccatcaa 600
gccgcacacy aagttcgaat ctgaagtgtg cattctgtcc aaagatgaag ggcggccgta 660
tactccgttc ttcaaaggct accgtccgca gttctacttc cgtactactg acgtgactgg 720
caccatcgaa ctgccggaag gcgtagagat ggtaatgccg ggcgacaaca tcaaatggt 780
tggtaccctg atccacccga tcgcaatgga cgacggtctg cgtttcgcaa tc 832
```

```
<210> 166
<211> 817
<212> DNA
<213> Serratia fonticola DSM 4576
```

```
<400> 166
cggcgctatc ctggttgtag ctgcgactga cggccctatg cctcagactc gtgagcacat 60
cctgctgggt cgtcagggtg gcgttccctt catcatcgta ttcataaaca aatgcgacat 120
ggttgatgat gaagagctgc tggaaactgg agaaatggaa gtccgtgaac ttctgtctgc 180
ttatgacttc cctggtgatg acctgccggt tgttcgtggg tcagcgctga aagcactgga 240
aggcgaagct gagtgggaag ctaaaatcat cgagctggcc ggtcacctgg attcctacct 300
cccagaacca gagcgtgcta tcgatcagcc gttcctgctg ccaatcgaag acgtattctc 360
```

catctccggt	cgtggtaccg	tagttaccgg	tctgtgtgag	cgcggtatcg	ttaaagttgg	420
cgaagaagtt	gaaatcggtg	gtatcaaaga	caccgttaag	tctacctgta	ctggcggttga	480
aatgttccgc	aaactgctgg	acgaaggccg	tgctggtgag	aacgttggtg	ttctgctgcg	540
tggtatcaag	cgtgaagaca	tcgaacgtgg	tcagggtactg	gctaaaccag	gttccatcaa	600
gccgcacact	cagttcgatt	cagaagtgtg	tatcctgagc	aaagaagaag	gtggtcgtca	660
tactccattc	ttcaaagggt	accgtccaca	gttctacttc	cgtacaactg	acgtgaccgg	720
taccatcgaa	ctgccagaag	gcgtagagat	ggtaatgccg	ggcgataacg	tgaacatggt	780
tgttaccctg	atccacccaa	tcgctatgga	ccaaggc			817

<210> 167
 <211> 787
 <212> DNA
 <213> *Serratia liquefaciens* ATCC 27592

<400> 167						
gctgcgactg	acggcccaat	gcctcagacc	cgtgagcaca	tcctgctggg	tcgtcagggtt	60
ggcggttcctt	tcatcatcgt	attcatgaac	aaatgcgaca	tggttgatga	tgaagagctg	120
ctggaactgg	tagaaatgga	agttcgtgaa	cttctgtctg	cttacgactt	ccctggtgat	180
gacctgccgg	ttgttcgtgg	ttcagcgctg	aaagcactgg	aaggcgaagc	tgagtgggaa	240
gctaaaatca	tcgagctggc	cggttacctg	gattcttaca	tcccagaacc	agagcgtgct	300
atcgacaagc	cgttcctgct	gccaatcgaa	gacgtcttct	ccatctccgg	tcgtggtacc	360
gttgttaccg	gtcgtgttga	gcgcggtatc	gttaaagttg	gcgaagaagt	tgaaatcgtt	420
ggtatcaaag	acaccgttaa	gtctacctgt	actggcggtg	aaatgttccg	caaactgctg	480
gacgaaggcc	gtgctggtga	gaacgttggt	gttctgctgc	gtggatatcaa	gcgtgaagac	540
atcgaacgtg	gtcagggtact	ggctaaacca	ggttcaatca	agccacacac	caagttcgac	600
tcagaagtgt	acatcctgag	caaagaagaa	ggtggtcgtc	atactccatt	cttcaaaggc	660
taccgtccac	agttctactt	ccgtacaact	gacgtgaccg	gtaccatcga	actgccagaa	720
ggcggttgaaa	tggtaatgcc	aggtgacaac	gtgaacatgg	ttgttaccct	gatccaccca	780
atcgcga						787

<210> 168
 <211> 745
 <212> DNA
 <213> *Serratia marcescens* ATCC 13880

<400> 168						
gcctcagact	cgtgagcaca	tcctgctggg	tcgtcagggtt	ggcggttcctt	tcatcatcgt	60
attcatgaac	aaatgcgaca	tggttgatga	tgaagagctg	ytggaactgg	tagaaatgga	120
agttcgcgaa	ctgctgtccg	cttacgactt	ccctggcgac	gacctgccgg	taatccgcgg	180
ttccgcgctg	aaagcgctgg	aaggcgaagc	tgagtgggaa	gcgaaaatca	tcgaactggc	240
cgaagccctg	gacagctaca	tcccagagcc	agagcgtgct	atcgacaagc	cgttcctgct	300
gccaatcgaa	gacgtattct	ccatctccgg	tcgtggtacc	gttggtaccg	gtcgtgttga	360
gcgcggtatc	atcaaagttg	gcgaagaagt	tgaaatcgtt	ggtatcaaag	acaccgttaa	420
gtctacctgt	actggcggtg	aaatgttccg	caaactgctg	gacgaaggcc	gtgctggtga	480
gaacgtaggt	gttctgctgc	gtggtatcaa	acgtgaagaa	atcgaacgtg	gtcagggtact	540
ggctaagcca	ggctccatca	agccgcacac	ccagttcgaa	tctgaagtgt	acatcctgag	600
caaagatgaa	ggtggtcgtc	acackccatt	cttcaaaggc	taccgtccac	agttctactt	660
ccgtaccact	gacgtgaccg	gtaccatcga	actgccagaa	ggcgtagaga	tggtaatgcc	720
aggcgacaac	gtgaacatgg	ttgta				745

<210> 169
 <211> 829
 <212> DNA
 <213> *Serratia odorifera* ATCC 33077

<400> 169						
ggcgcaatcc	tggttggtgc	tgcgactgac	ggccctatgc	ctcagacccg	tgagcacatc	60
ctgctgggtc	gccagggttg	cgttcctttc	atcatcgtgt	tcatgaacaa	atgtgacatg	120
gttgatgacg	aagagctgct	ggaactggta	gaaatggaag	ttcgcgagct	gctgtctgct	180
tacgatttcc	ctggcgacga	cctgccagta	atccgcggtt	ctgcgctgaa	agcgtgggaa	240
ggcgaagcag	agtgggaagc	taagattgta	gaactggctg	aagcgctgga	ttcttacatc	300
ccagaaccag	agcgtgctat	cgacaagccg	ttcctgctgc	caatcgaaga	cgtattctcc	360
atctccggtc	gtggtaccgt	tgttaccggt	cgtgttgagc	gcggtatcat	caaagttggc	420

gaagaagttg	aaatcggttg	tatcaaagac	accgttaagt	ctacctgtac	cggtgtagaa	480
atgttccgca	aactgctgga	cgaaggccgt	gctggtgaga	acgttgggtg	tctgctgctg	540
ggtatcaagc	gtgaagacat	cgaacgtggg	caggttcttg	ctaaaccagg	ttctatcaag	600
ccgcacacca	aattcgactc	agaagtgtac	atcctgagca	aagaagaagg	tggtcgtcac	660
acgccattct	tcaaaggcta	ccgtccacag	ttctacttcc	gtactactga	cgtgaccggg	720
accatcgaac	tgccagaagg	cgtagagatg	gtaatgccag	gcgataacgt	gaacatgggt	780
gttaccctga	ttcacccaat	cgcaatggac	gacggtctgc	gttttcgcaa		829

<210> 170
 <211> 830
 <212> DNA
 <213> *Serratia plymuthica* DSM 4540

<400> 170						
cggcgcaatc	ctggttggtg	ctgcgactga	cgccccaatg	cctcagaccc	gtgagcacat	60
cctgctgggt	cgtcagggtg	gcgttccttt	catcatcgta	ttcatgaaca	aatgcgacat	120
ggttgatgat	gaagagctgc	tggaactggg	agaaatggaa	gttcgtgaac	ttctgtctgc	180
ttacgacttc	cctgggtgatg	acctgccggg	tggtcgtggg	tcagcgctga	aagcactgga	240
aggcgaacca	gagtggggaag	ctaaaatcat	cgagctgggt	ggtttcctgg	attcttacat	300
cccagaacca	gagcgtgcta	tcgacaagcc	gttcctgctg	ccaatcgaag	acgtattctc	360
catctccggg	cgtggtaccg	ttgttaccgg	tcgtgttgag	cgcggtatcg	ttaaagttgg	420
cgaagaagtt	gaaatcgtgg	gtatcaaaga	caccgttaag	tctacctgta	ccggcggtga	480
aatgttccgc	aaactgctgg	acgaaggccg	tgctgggtgag	aacgtgggtg	ttctgctgcg	540
tggtatcaag	cgcgaaagata	tcgaacgtgg	tcaggtcctg	gctaaaccag	gttcaatcaa	600
gccacacacc	aagtttgact	cagaagtgtg	catcctgagc	aaagaagaag	gtggctcgta	660
tactccattc	ttcaaaggct	accgtccaca	gttctacttc	cgtacaactg	acgtgaccgg	720
taccatcgaa	ctgccagaag	gcgtagagat	ggtaatgccg	ggtgacaacg	tgaacatggg	780
tgtaaccctg	atccacccaa	tcgcgatgga	cgacggcctg	cgtttcgcaa		830

<210> 171
 <211> 829
 <212> DNA
 <213> *Serratia rubidaea* ATCC 27593

<400> 171						
ggcgcaatcc	tggtagtagc	agcgactgac	ggcccaatgc	ctcagacccg	tgagcacatc	60
ctgctggggc	gccaggtagg	cgtaccttac	atcatcgta	tcatgaacaa	atgcgacatg	120
gtagatgatg	aagagctgct	ggaactggta	gagatggaa	ttcgcgaaact	gctgtctgct	180
tacgacttcc	caggcgacga	cctgccggta	atccgtgggt	ccgcgctgaa	agcgctggaa	240
ggcgaagccg	agtgggaagc	gaaaatcggt	gagctggcag	aagcgctgga	cagctacatc	300
ccagagccag	agcgtgctgt	agacaagccg	ttcctgctgc	caatcgaaga	cgtattctcc	360
atctccgggt	gtggtaccgt	tgttaccggg	cgtgtagagc	gcggtatcat	caaagttggg	420
gaagaagtgc	aaatcgtagg	tatcaaagac	accgttaagt	ctacctgtac	tggtgtagaa	480
atgttccgca	aactgctgga	cgaaggccgt	gctggtgaga	acgtaggtgt	tctgctgctg	540
ggtatcaagc	gtgaagaaat	cgaacgtggg	caggtactgg	cgaagccagg	ttcaatcaag	600
ccgcacaccc	agttcgaatc	tgaagtgtac	attctgtcca	aagacgaagg	cgcccgctcat	660
actccgttct	tcaaaggcta	ccgtccacag	ttctacttcc	gtacaactga	cgtgaccggg	720
accatcgaac	tgccagaagg	cgtagagatg	gtaatgccag	gcgacaacgt	gaacatgaaa	780
gttactctga	ttcacccaat	cgcaatggac	gacggtctgc	gttttcgcaa		829

<210> 172
 <211> 826
 <212> DNA
 <213> *Shigella boydii* ATCC 9207

<400> 172						
cggcgcgatc	ytggtagttg	ctgcgactga	cgcccgatg	ccgcagactc	gtgagcacat	60
cctgctgggt	cgtcaggtag	gcgttccgta	catcatcgta	ttcctgaaca	aatgcgacat	120
ggttgatgac	gaagagctgc	tggaactggg	tgaatggaa	gttcgtgaac	ttctgtctca	180
gtacgacttc	ccgggcgacg	acactccgat	cggtcgtggg	tctgctctga	aagcgctgga	240
aggcgacgca	gagtggggaag	cgaaaatcct	ggaaactggg	ggcttcctgg	attcttacat	300
tccggaacca	gagcgtgcga	ttgacaagcc	gttcctgctg	ccgatcgaag	acgtattctc	360
catctccggg	cgtggtaccg	ttgttaccgg	tcgtgtagaa	cgcggtatca	tcaaagttgg	420

tgaagaagtt	gaaatcgttg	gtatcaaaga	gactcagaag	tctacctgta	ctggcggttga	480
aatgttccgc	aaactgctgg	acgaaggccg	tgctggtgag	aacgtagggtg	ttctgtctgcg	540
tggtatcaaa	cgtgaagaaa	tcgaacgtgg	tcagggtactg	gctaagcccg	gcaccatcaa	600
gccgcacacc	aagttcgaat	ctgaagtgtg	catttctgtcc	aaagatgaag	gcgcccgctca	660
tactccgttc	ttcaaaggct	accgtccgca	gttctacttc	cgtactactg	acgtgactgg	720
taccatcgaa	ctgccggaag	gcgtagagat	ggtaatgccg	ggcgacaaca	tcaaaatggt	780
tgttaccctg	atccacccga	tcgcgatgga	cgacgggtctg	cgtttc		826

<210> 173

<211> 818

<212> DNA

<213> *Shigella dysenteriae* ATCC 11835

<400> 173

tggtagttgc	tgcgactgac	ggcccgatgc	cgcagaactcg	tgagcacatc	ctgctgggtc	60
gtcaggtagg	cgttccgtac	atcatcgtgt	tcctgaacaa	atgcgacatg	gttgatgacg	120
aagagctgct	ggaactgggt	gaaatggaag	ttcgtgaact	tctgtctcag	tacgacttcc	180
cgggcgacga	caactccgatc	gttcgtgggt	ctgctctgaa	agcgctggaa	ggcgacgcag	240
agtgggaagc	gaaaatcctg	gaactggctg	gcttcctgga	ttcytayatt	ccggaaccag	300
agcgtgcat	tgacaagccg	ttcctgctgc	cgatcgaaga	cgtattctcc	atctccggtc	360
gtggtaccgt	tgttaccggt	cgtgtagaac	gcggtatcat	caaagtgggt	gaagaagttg	420
aaatcgttgg	tatcaaagag	acycagaagt	ctacctgtac	tggcgttgaa	atgttccgca	480
aactgctgga	cgaaggccgt	gctggtgaga	acgtagggtg	tctgctgcgt	ggtatcaaac	540
gtgaagaaat	cgaacgtggt	caggctactgg	cgaagccrgg	caccatcaag	ccgcacacca	600
agttcgaatc	tgaagtgtac	attctgtcca	aagatgaagg	cggccgtcat	actccgttct	660
tcaaaggcta	ccgtccgcag	ttctacttcc	gtactactga	cgtgactggt	accatcgaac	720
tgccggaagg	cgtagagatg	gtaatgccgg	gcgacaacat	caaaatggtt	gttaccctga	780
tccaccgat	cgcgatggac	gacggtctgc	gtttcgca			818

<210> 174

<211> 806

<212> DNA

<213> *Shigella flexneri* ATCC 12022

<400> 174

cctggtagtt	gctgcgactg	acggcccgat	gccgcagact	cgtgagcaca	tcctgctggg	60
tcgtcaggta	ggcgttccgt	acatcatcgt	gttcctgaac	aaatgcgaca	tggttgatga	120
cgaagagctg	ctggaactgg	ttgaaatgga	agttcgtgaa	cttctgtctc	agtagcactt	180
cccgggcgac	gacactccga	tcgttcgtgg	ttctgctctg	aaagcgctgg	aaggcgacgc	240
agagtgggaa	gcgaaaatcc	tggaaactggc	tggttcctctg	gattcttaca	ttccggaacc	300
agagcgtgcg	attgacaagc	cgttcctgtct	gccgacgaa	gacgtattct	ccatctccgg	360
tcgtggtacc	gttgttaccg	gtcgtgtaga	acgcggtatc	atcaaagttg	gtgaagaagt	420
tgaaatcggt	ggtatcaaaag	agactcagaa	gtctacctgt	actggcggtg	aaatgttccg	480
caaactgctg	gacgaaggcc	gtgctggtga	gaacgtagggt	gttctgctgc	gtggtatcaa	540
acgtgaagaa	atcgaacgtg	gtcagggtact	ggctaagccg	ggcaccatca	agccgcacac	600
caagttcgaa	tctgaagtgt	acattctgtc	caaagatgaa	ggcgmcgtc	atactccgtt	660
cttcaaaggc	taccgtccgc	agttctactt	ccgtactact	gacgtgactg	gtaccatcga	720
actgccggaa	ggcgtagaga	tggtaatgcc	gggcgacaac	atcaaaatgg	ttgttaccct	780
gatccaccgc	atcgcgatgg	acgacg				806

<210> 175

<211> 832

<212> DNA

<213> *Shigella sonnei* ATCC 29930

<400> 175

cggcgcgatc	ctggtagttg	ctgcgactga	cggcccgatg	ccgcagactc	gtgagcacat	60
cctgtggtgg	cgtcaggtag	gcgttccgta	catcatcgtg	ttcctgaaca	aatgcgacat	120
ggttgatgac	gaagagctgc	tggaactgggt	tgaaatggaa	gttcgtgaac	ttctgtctca	180
gtacgacttc	ccgggcgacg	acactccgat	tctgctggtg	tctgctctga	aagcgtcgga	240
agggcgacga	gagtggggaag	cgaaaatcct	ggaactgggt	ggcttccctg	attctttacat	300
tccggaacca	gagcgtgcga	ttgacaagcc	gttcctgctg	ccgatcgaag	acgtattctc	360
catctccggt	cgtggtaccg	ttgttaccgg	tcgtgtagaa	cgcggtatca	tcaaagttgg	420

tgaagaagtt	gaaatcgttg	gtatcaaaga	gactcagaag	tctacctgta	ctggcggttg	480
aatgttccgc	aaactgctgg	acgaaggccg	tgctggtgag	aacgtaggtg	ttctgctgcg	540
tggtatcaaa	cgtgaagaaa	tcgaacgtgg	tcaggtactg	gctaagccgg	gcaccatcaa	600
gccgcacacc	aagttcgaat	ctgaagtgtg	cattctgtcc	aaagatgaag	gcggycgta	660
tactccgttc	ttcaaaggct	accgtccgca	gttctacttc	cgtactactg	acgtgactgg	720
taccatcgaa	ctgccggaag	gcgtagagat	ggtaatgccg	ggcgacaaca	tcaaaatggt	780
tgttaccctg	atccacccga	tcgcgatgga	cgacggtctg	cgtttcgcaa	tc	832

<210> 176

<211> 716

<212> DNA

<213> *Staphylococcus aureus* ATCC 13301

<400> 176

tctgctgctg	acgggtccaat	gccacaaact	cgtgaacaca	ttctttttatc	acgtaacggt	60
ggtgtaccag	cattagtagt	attcttaaac	aaagttgaca	tggttgacga	tgaagaatta	120
ttagaattag	tagaaatgga	agttcgtgac	ttattaagcg	aatatgactt	cccaggtgac	180
gatgtacctg	taatcgctgg	ttcagcatta	aaagcttttag	aaggcgatgc	tcaatacgaa	240
gaaaaaatct	tagaattaat	ggaagctgta	gatacttaca	ttccaactcc	agaacgtgat	300
tctgacaaac	cattcatgat	gccagttgag	gacgtattct	caatcactgg	tcgtggtaact	360
gttgctacag	gccgtgttga	acgtgggtcaa	atcaaagttg	gtgaagaagt	tgaaatcatc	420
ggttttacatg	acacatctaa	aacaactggt	acaggtgttg	aaatgttccg	taaattatta	480
gactacgctg	aagctgggtga	caacattggg	gcattattac	gtggtgttgc	tcgtgaagac	540
gtacaacgtg	gtcaagtatt	agctgctcct	ggttcaatta	caccacatac	tgaattcaaa	600
gcagaagtat	acgtattatc	aaaagacgaa	ggtggacgtc	acactccatt	cttctcaaac	660
tatcgctccac	aattctatct	ccgtactact	gacgtaactg	gtgttggttca	cttacc	716

<210> 177

<211> 719

<212> DNA

<213> *Staphylococcus aureus* ATCC 29247

<400> 177

ttctttttatc	acgtaacggt	ggtgtaccag	cattagtagt	attcttaaac	aaagttgaca	60
tggttgacga	tgaagaatta	ttagaattag	tagaaatgga	agttcgtgac	ttattaagcg	120
aatatgactt	cccaggtgac	gatgtacctg	taatcgctgg	ttcagcatta	aaagcttttag	180
aaggcgatgc	tcaatacgaa	gaaaaaatct	tagaattaat	ggaagctgta	gatacttaca	240
ttccaactcc	agaacgtgat	tctgacaaac	cattcatgat	gccagttgag	gacgtattct	300
caatcactgg	tcgtggtaact	gttgctacag	gccgtgttga	acgtgggtcaa	atcaaagttg	360
gtgaagaagt	tgaaatcatc	ggttttacatg	acacatctaa	aacaactggt	acaggtgttg	420
aaatgttccg	taaattatta	gactacgctg	aagctgggtga	caacattggg	gcattattac	480
gtggtgttgc	tcgtgaagac	gtacaacgtg	gtcaagtatt	agctgctcct	ggttcaatta	540
caccacatac	tgaattcaaa	gcagaagtat	acgtattatc	aaaagacgaa	ggtggacgtc	600
acactccatt	cttctcaaac	tatcgctccac	aattctatct	ccgtactact	gacgtaactg	660
gtgttggttca	cttaccagaa	ggtmctgaaa	tggtaatgcc	tggtgataac	ggtgaaatg	719

<210> 178

<211> 625

<212> DNA

<213> *Staphylococcus aureus* ATCC 33591

<400> 178

gtgaacacat	tctttttatca	cgtaacggtg	gtgtaccagc	attagtagta	ttcttaaaca	60
aagttgacat	ggttgacgat	gaagaattat	tagaattagt	agaaatggaa	gttcgtgact	120
tattaagcga	atatgacttc	ccaggtgacg	atgtacctgt	aatcgctggg	tcagcattaa	180
aagcttttaga	aggcgatgct	caatacgaag	aaaaaatctt	agaattaatg	gaagctgtag	240
atacttacat	tccaactcca	gaacgtgatt	ctgacaaacc	attcatgatg	ccagttgagg	300
acgtattctc	aatcactggg	cgtgggtactg	ttgctacagg	ccgtgttgaa	cgtgggtcaa	360
tcaaagtttg	tgaagaagtt	gaaatcatcg	gtttacatga	cacatctaaa	acaactgtta	420
caggtgttga	aatgttccgt	aaattattag	actacgctga	agctgggtgac	aacattgggt	480
cattattacg	tggtgttgct	cgtgaagacg	tacaacgtgg	tcaagtatta	gctgctcctg	540
gttcaattac	accacatact	gaattcaaaag	cagaagtata	cgtattatca	aaagacgaag	600
gtggacgtca	cactccattc	ttctc				625

<210> 179
<211> 704
<212> DNA
<213> *Staphylococcus aureus* ATCC 43300

<400> 179
gttgggtgtac cagcattagt agtattctta aacaaagttg acatgggtga cgatgaagaa 60
ttattagaat tagtagaaat ggaagttcgt gacttattaa gcgaatatga cttcccaggt 120
gacgatgtac ctgtaatcgc tgggttcagca ttaaaagctt tagaaggcga tgctcaatac 180
gaagaaaaaa tcttagaatt aatggaagct gtagatactt acattccaac tccagaacgt 240
gattctgaca aaccattcat gatgccagtt gaggacgtat tctcaatcac tggctcgtggt 300
actgttgcta caggccgtgt tgaacgtggt caaatcaaag ttggtgaaga agttgaaatc 360
atcggttttac atgacacatc taaaacaact gttacagggtg ttgaaatggt ccgtaaaatta 420
ttagactacg ctgaagctgg tgacaacatt ggtgcattat tacgtgggtg tgctcgtgaa 480
gacgtacaac gtgggtcaagt attagctgct cctgggttcaa ttacaccaca tactgaattc 540
aaagcagaag tatacgtatt atcaaaagac gaaggtggac gtcacactcc attcttctca 600
aactatcgtc cacaattcta tttccgtact actgacgtaa ctgggtgtgt tcaactacca 660
gaaggtactg aaatggtaat gctgggtgat aacgttgaaa tgac 704

<210> 180
<211> 730
<212> DNA
<213> *Staphylococcus aureus* subsp. *aureus* ATCC 6538

<400> 180
gtgaacacat tcttttatca cgtaacgttg gtgtaccagc attagtagta ttcttaaaca 60
aagttgacat ggttgacgat gaagaattat tagaattagt agaaatggaa gttcgtgact 120
tattaagcga atatgacttc ccaggtgacg atgtacctgt aatcgctggg tcagcattaa 180
aagctttaga aggcgatgct caatacgaag aaaaaatctt agaattaatg gaagctgtag 240
atacttacat tccaactcca gaacgtgatt ctgacaaacc attcatgatg ccagttgagg 300
acgtattctc aatcactggg cgtgggtactg ttgctacagg ccgtggtgaa cgtgggtcaaa 360
tcaaagttgg tgaagaagtt gaaatcatcg gtttacatga cacatctaaa acaactgta 420
cagggtttga aatgttccgt aaattattag actacgttga agctgggtgac aacattgggtg 480
cattattacg tgggtgttgc cgtgaagacg tacaacgtgg tcaagtatta gctgctcctg 540
gttcaattac accacatact gaattcaaag cagaagtata cgtattatca aaagacgaag 600
gtggacgtca cactccattc ttctcaaact atcgtccaca attctatttc cgtactactg 660
acgtaactgg tggtgttcac ttaccagaag gtactgaaat ggtaatgcct ggtgataacg 720
ttgaaatgac 730

<210> 181
<211> 834
<212> DNA
<213> *Staphylococcus auricularis* ATCC 33753

<400> 181
cgggtgcgat ttagttgtat ctgcagctga tgggtccaatg ccacaaactc gtgaacacat 60
cttattatca cgtaacgttg gtgtaccagc attagttgta ttcttaaaca aagttgacca 120
agttgacgac gaagaattat tagaattagt agaaatggaa gttcgtgact tattaagcga 180
atacgactac ccaggtgacg atgtacctgt aatctctggt tctgcgttga aagcattaga 240
agggcagaaa gaatacgaac aaaaaatctt agacttaatg caacaagttg acgattacat 300
tccaactcca gaacgtgact ctgataaacc attcatgatg ccagttgaag acgtattctc 360
aatcactggg cgtgggtactg ttgcaacagg ccgtggtgaa cgtgggtcaaa tcaaagtcgg 420
tgaagaagtt gaaatcatcg gtatgaaaga cggttcacaa aaaacaacag ttactgggtg 480
agaaatgttc cgtaaattat tagactacgc tgaagctggg gacaacatcg gtgctttatt 540
acgtgggtatt tcacgtgaag aagtacaagc tggccaagtt tttagctgctc ctggttcaat 600
tacaccacac actaaattca ctgcagaagt ttacgtatta tctaaagatg aaggtggacg 660
tcacactcca ttcttctcta actaccgtcc acaattctat ttccgtacta ctgacgtaac 720
aggtgttggt actttaccag aaggtacaga aatgggtaatg cctggcgata acgttaaaat 780
ggaagttgaa ttaatttctc caatcgctat cgaagacggt actcgtttct caat 834

<210> 182
<211> 835

<212> DNA

<213> *Staphylococcus capitis* subsp. *capitis* ATCC 27840

<400> 182

```

cggcgggtatc ttagtagtat ctgctgctga cgggtccaatg ccacaaactc gtgaacacat 60
cttattatca cgtaacggtg gtgtaccagc attagttgta ttcttaaaca aagttgacat 120
ggtagacgac gaagaattat tagaattagt tgaaatggaa gttcgtgact tattaagcga 180
atatgacttc ccaggtgatg atgtacctgt aatcgctggg tcagcattaa aagctttaga 240
aggcgtatgct caatacgaag aaaaaatctt agaattaatg caagcagttg atgattacat 300
tccaactcca gaacgtgatt ctgacaaacc attcatgatg ccagttgagg acgtattctc 360
aatcactggg cgtgggtactg ttgctacagg ccgtggtgaa cgtgggtcaaa tcaaagttgg 420
tgaagaagtt gaaatcatcg gtatccacga aacttctaaa acaactgtta ctggtgtaga 480
aatgttccgt aaattattag actacgtgta agctgggtgac aacatcgggtg ctttattacg 540
tggtgttgct cgtgaagacg tacaacgtgg tcaagtatta gctgctcctg gttcaatcac 600
accacacact aaattcaaag cggaagttaa cgttttatct aaagacgaag gtggacgtca 660
cactccattc ttcagtaact accgccaca attctatttc cgtactactg acgtaactgg 720
tggtgttaac ttaccagaag gtactgaaat gggtatgcct ggcgacaacg ttgaaatgac 780
agttgaatta atcgctccta tcgctattga agacgggtact cgtttctcaa tcgga 835

```

<210> 183

<211> 804

<212> DNA

<213> *Macrococcus caseolyticus* ATCC 13548

<400> 183

```

gtatcttagt agtatctgct gctgacggtc caatgccaca aactcgtgaa cacatccttt 60
tatcacgtaa cgttggtgta ccagcattag tagtattctt gaacaaagtt gacatgggtg 120
acgatgaaga attattagaa ttagttgaaa tggaagttcg tgacttatta tctgaatatg 180
acttccctgg tgacgatgta cctgtaatcg ctggatctgc tttaaaagca ttagaaggcg 240
ttgaagaata cgaagacaaa atcatggaat taatggacgc agttgatgag tacatcccaa 300
ctccagaacg tgattctgac aaaccattca tgatgccagt tgaggacgta ttctcaatca 360
ctggctcgtg tacagttgca actggacgtg ttgagcgtgg acaagttaaa gttggtgaag 420
aagttgaaat cattggttta actgaagaac cagcaaaaac tacagttaca ggtgtagaaa 480
tgttccgtaa attattagat tacgctgaag ctggagataa catcgggtgct ttattacgtg 540
gtgtttctcg tgaagacgta caacgtggac aagtattagc taaaccaggt tcaattactc 600
cacatactaa attcaaagct gaagtttacg tattatctaa agaagaaggt ggacgtcata 660
ctccattctt cactaactac cgccctcagt tctacttccg tacaactgac gtaactgggtg 720
tagttaactt accagaaggt actgaaatgg taatgcctgg agataacatc gaaatgaacg 780
ttgaattaat ttctccaatc gcga 804

```

<210> 184

<211> 832

<212> DNA

<213> *Staphylococcus cohnii* DSM 20260

<400> 184

```

cggagctatc ttagtagtat ctgctgctga tggcccaatg ccacaaactc gtgaacatat 60
ccttttatca cgtaacggtg gtgttccagc attagttgta ttcttaaaca aagttgacat 120
gggtgacgat gaagaattat tagaattagt agaaatggaa gttcgtgact tattaagcga 180
atatgacttc ccaggtgacg atgtacctgt aatctctggg tcagcattaa aagctcttga 240
aggcgtgctg gactatgagc aaaaaatctt agacttaatg caagctgttg atgacttcat 300
tccaacacca gaacgtgatt ctgacaaacc attcatgatg ccagttgagg acgtattctc 360
aatcactggg cgtgggtactg ttgctacagg gcgtggtgaa cgtgggtcaaa tcaaagtcgg 420
tgaagaagtt gaaatcatcg gtatgcaaga agattcaagc aaaacaactg ttactgggtg 480
agaaatgttc cgtaaattat tagactacgc tgaagctggg gacaacattg gtgcgttatt 540
acgtgggtgt gcaactgaag acatccaacg ttgtcaagtt ttagctgctc ctggttcaat 600
tacaccacac acaacttta aagcgggaat ttacgtttta tcaaaagatg aaggtggccg 660
tcatacgcca ttcttcagta actatcgccc acaattctat ttccgtacta ctgacgtaac 720
aggtgttggt actttaccag aaggtactga aatgggtatg cctggcgaca acgtagaaat 780
ggaagttgaa ctaatttctc caatcgctat cgaagacggg acacgtttct ct 832

```

<210> 185

<211> 699

<212> DNA

<213> *Staphylococcus epidermidis* strain CSG 269

<400> 185

```
atctgctgct gacggtccaa tgccacaaac tcgtgaacac atctttattat cacgtaacgt 60
tgggtgtacca gcattagttg tattcttaaa caaagttgac atggtagacg acgaagaatt 120
attagaatta gttgaaatgg aagttcgtga cttattaagc gaatatgact tcccaggtga 180
cgatgtacct gtaatcgctg gttctgcatt aaaagcatta gaaggcgatg ctgaatacga 240
acaaaaaatc ttagacttaa tgcaagcagt tgatgattac attccaactc cagaacgtga 300
ttctgacaaa ccattcatga tgccagttga ggacgtattc tcaatcactg gtcgtggtac 360
tgttgctaca ggccgtggtg aacgtggtca aatcaaagtt ggtgaagaag ttgaaatcat 420
cggtatgcac gaaacttcta aaacaactgt tactggtgta gaaatgttcc gttaaattatt 480
agactacgct gaagctggtg acaacatcgg tgctttatta cgtggtggtg cacgtgaaga 540
cgtacaacgt ggtcaagtat tagctgctcc tggttctatt acaccacaca caaaattcaa 600
agctgaagta tacgtattat ctaaagatga aggtggacgt cacactccat tcttcactaa 660
ctatcgccca caattctatt tccgtactac tgacgtaac 699
```

<210> 186

<211> 829

<212> DNA

<213> *Staphylococcus haemolyticus* ATCC 29970

<400> 186

```
cggcggtatc ttagtagtat ctgctgctga cgggtccaatg ccacaaactc gtgaacacat 60
tcttttatca cgtaacgttg gtgtaccagc attagtagta ttcttaaata aagttgacat 120
ggttgacgat gaagaattat tagaattagt tgaaatggaa gtacgtgact tattatctga 180
atacgacttc ccaggtgacg atgtacctgt aatcgctggt tcagcattaa aagctttaga 240
aggcgatgct caatacgaag aaaaaatctt agaattaatg caagcagttg atgactacat 300
tccaactcca gaacgtgatt ctgacaaacc attcatgatg ccagttgagg acgtattctc 360
aatcactggt cgtggtactg ttgctacagg ccgtggtgaa cgtgggcaaa tcaaagttgg 420
tgaagaagtt gaaatcattg gtatccatga cacttctaaa acaactgtta ctggtgtaga 480
aatgttccgt aaattattag actacgctga agctggtgac aacatcgggt cattattacg 540
tggtgttgct cgtgaagacg tacaacgtgg tcaagtatta gctgctccag gttcaatcac 600
acctcacaca aaatttaaag cagacgtata cgttttatct aaagacgaag gtggacgtca 660
cactccattc ttcacaaact atcgtccaca attctatttc cgtactactg acgtaactgg 720
tggtgttaac ttaccagaag gtactgaaat ggttatgcct ggcgacaacg ttgaaatgac 780
agtagaatta atcgctccta tcgcgattga agacgggtact cgttttctca 829
```

<210> 187

<211> 705

<212> DNA

<213> *Staphylococcus warneri* strain CSG 123

<400> 187

```
cacaaactcg tgaacacatt cttttatcac gtaacggttg tgtaccagct ttagttgtat 60
tcttaaacaa agttgatatg gtagacgacg aagaattatt agaattagta gaaatggaag 120
ttcgtgactt attatctgaa tatgacttcc caggtgacga cgtacctgta atcgctggtt 180
cagcattaaa agcttttagaa ggcgacgaaa aatacgaaga aaaaatctta gaattaatgc 240
aagcagttga tgactacatt ccaactccag aacgtgattc tgacaaacca ttcatgatgc 300
cagttgagga cgtattctca atcactgggtc gtggtactgt tgctacaggc cgtggtgaac 360
gtggtcaaat caaagttggt gaagaagttg aaatcatcgg tttacatgac acttctaaaa 420
caactgttac tgggtgtagaa atgttccgta agttattaga ctacgctgaa gctgggtgaca 480
acatcgggtg tttattacgt ggtgttgctc tggaagacgt acaacgtggt caagtattag 540
ctgctcctgg ttcaattaca ccacatacaa aattcaaagc ggaagtttac gttttatcta 600
aagacgaagg tggacgtcac actccattct tcagtaacta ccgccacaa ttctatttcc 660
gtactactga cgtaactggc gttgttcaat taccagaagg tactg 705
```

<210> 188

<211> 678

<212> DNA

<213> *Staphylococcus haemolyticus* strain CSG 23

<400> 188

ttttatcacg	taacgttggg	gtaccagcat	tagtagtatt	cttaaaca	gttgacatgg	60
ttgacgatga	agaattatta	gaattagt	aaatggaagt	acgtgactta	ttatctgaat	120
acgacttccc	aggtgacgac	gtacctgtaa	tcgctgggtc	agctttaaaa	gctttagaag	180
gcatgctca	atacgaagaa	aaaatcttag	aattaatgca	agcagttgat	gattacattc	240
caactccaga	acgtgactct	gataaaccat	tcatgatgcc	agttgaggac	gtattctcaa	300
tcaactggcg	tggtactgtt	gctacaggtc	gtgttgaacg	tggtcaaata	aaagtgggtg	360
aagaagttga	aattattggg	atcaaagaaa	cttctaaaaa	aactgttact	ggtgtagaaa	420
tggtccgtaa	attattagac	tacgtgaag	ctggtgacaa	catcggtgct	ttattacgtg	480
gtgttgctcg	tgaagatgta	caacgtgggc	aagtattagc	tgctccaggt	tcaattacac	540
ctcacacaaa	attcaaagca	gacgtatacg	ttttatcaaa	agatgaaggt	ggacgtcata	600
ctccattctt	cactaactat	cgccacaat	tctatttccg	tactactgac	gtaactgggtg	660
ttgttaactt	accagaag					678

<210> 189

<211> 668

<212> DNA

<213> Staphylococcus haemolyticus strain CSG 33

<400> 189

accagcatta	gtagtattct	taaataaagt	tgacatgggt	gacgatgaag	aattattaga	60
attagttgaa	atggaagtac	gtgacttatt	atctgaatac	gacttcccag	gtgacgatgt	120
acctgtaatc	gctgggttcag	cattaaaagc	tttagaaggc	gatgctcaat	acgaagaaaa	180
aatcttagaa	ttaatgcaag	cagttgatga	ctacattcca	actccagaac	gtgattctga	240
caaaccattc	atgatgccag	ttgaggacgt	attctcaatc	actgggtcgtg	gtactggtgc	300
tacaggccgt	gttgaacgtg	gtcaaatcaa	agttgggtgaa	gaagttgaaa	tcattgggtat	360
ccatgacact	tctaaaacaa	ctgttactgg	tgtagaaatg	ttccgtaaat	tattagacta	420
cgctgaagct	ggtgacaaca	tcggtgcatt	attacgtggg	gttgctcgtg	aagacgtaca	480
acgtgggtcaa	gtattagctg	ctccaggttc	aatcacacct	cacacaaaat	ttaaagcaga	540
cgtatacgtt	ttatctaaag	acgaagggtg	acgtcacact	ccattcttca	caaactatcg	600
tccacaattc	tatttccgta	ctactgacgt	aactgggtgt	gttaacttac	cagaagggtac	660
tgaaatgg						668

<210> 190

<211> 593

<212> DNA

<213> Staphylococcus haemolyticus strain CSG 8

<400> 190

aaagttgaca	tggttgacga	tgaagaatta	ttagaattag	ttgaaatgga	agtacgtgac	60
ttattatctg	aatacgactt	cccagggtgac	gatgtacctg	taatcgctgg	ttcagcatta	120
aaagcttttag	aaggcgatgc	tcaatacgaa	gaaaaaatct	tagaattaat	gcaagcagtt	180
gatgattaca	ttccaactcc	agaacgtgat	tctgacaaac	cattcatgat	gccagttgag	240
gacgtattct	caatcactgg	tcgtgggtact	gttgctacag	gccgtgttga	acgtgggtcaa	300
atcaaagttg	gtgaagaagt	tgaaatcatt	ggtatccatg	acacttctaa	aacaactgtt	360
actggtgtag	aaatgttccg	taaattatta	gactacgctg	aagctgggtg	caacattgggt	420
gcattattac	gtggtgttgc	tcgtgaagac	gtacaacgtg	gtcaagtatt	agctgctcca	480
ggttcaatca	cacctcacac	aaaattttaa	gcagacgtat	acgttttatc	taaagacgaa	540
ggtggacgtc	acactccatt	cttcacaaac	tatcgtcacac	aattctattt	ccg	593

<210> 191

<211> 828

<212> DNA

<213> Staphylococcus hominis subsp. hominis ATCC 27844

<400> 191

cggcgctatc	ttagtagtat	ctgctgctga	tggtccaatg	ccacaaactc	gtgaacacat	60
tcttttatca	cgtaacgttg	gtgtaccagc	attagtagta	ttcttaaaca	aagttgacat	120
ggttgacgat	gaagaattat	tagaattagt	tgaaatggaa	gtacgtgact	tattatctga	180
atacgacttc	ccagggtgacg	acgtacctgt	aatcgctggg	tcagctttaa	aagctttaga	240
aggcgatgct	caatacgaag	aaaaaatctt	agaattaatg	caagcagttg	atgattatat	300
tccaaactcca	gaacgtgact	ctgataaaacc	attcatgatg	ccagttgagg	acgtattctc	360
aatcactggg	cgtgggtactg	ttgctacagg	ccgtgttgaa	cgtgggtcaaa	tcaaagttgg	420
tgaagaagtt	gaaattattg	gtatcaaaga	aacttctaaa	acaactgtta	ctggtgtaga	480

aatgttccgt	aaattatttag	actacgctga	agctgggtgac	aacatcggtg	ctttattacg	540
tgggtgttgct	cgtgaagatg	tacaacgtgg	tcaagtatta	gctgctccag	gttcaattac	600
acctcacaca	aaattcaaag	cagacgtata	cgttttatca	aaagatgaag	gtggacgtca	660
tactccattc	ttctctaact	atcgctccaca	attctatttc	cgtactactg	acgtaactgg	720
tgttggttaac	ttaccagaag	gtactgaaat	ggtaatgcct	ggtgacaacg	ttgaaatgac	780
agtagaatta	atcgctccta	tcgcgattga	agacgggtact	cgtttctc		828

<210> 192

<211> 620

<212> DNA

<213> *Staphylococcus warneri* ATCC 35982

<400> 192

atgggtccaat	gccacaaaact	cgtgaacaca	ttctttttatc	acgtaacggt	ggtgtaccag	60
cttttagttgt	attctttaaac	aaagtgtgata	tggtagacga	cgaagaatta	ttagaatttag	120
tagaaatgga	agttcgtgac	ttattatctg	aatatgactt	cccagggtgac	gacgtacctg	180
taatcgctgg	ttcagcatta	aaagcttttag	aaggcgacga	aaaatacgaa	gaaaaaatct	240
tagaattaat	gcaagcagtt	gatgactaca	ttccaactcc	agaacgtgat	tctgacaaac	300
cattcatgat	gccagttgag	gacgtattct	caatcactgg	tcgtgggtact	gttgctacag	360
gccgtgttga	acgtgggtcaa	atcaaagttg	gtgaagaagt	tgaaatcatc	ggtttacatg	420
acactttctaa	aacaactggt	actggtgtag	aaatgttccg	taagttatta	gactacgctg	480
aagctgggtga	caacatcggt	gctttattac	gtgggtgttg	tcgtgaagac	gtacaacgtg	540
gtcaagtatt	agctgctcct	ggttcaatta	caccacatac	aaaattcaaa	gcggaagttt	600
acgtttttatc	taaagacgaa					620

<210> 193

<211> 692

<212> DNA

<213> *Staphylococcus hominis* strain CSG 170

<400> 193

ccagcattag	tagtattctt	aaacaaagtt	gacatgggtg	acgatgaaga	attattagaa	60
ttagttagaa	tggaaagtacg	tgacttatta	tctgaatacg	acttcccagg	tgacgacgta	120
cctgtaatcg	ctgggttcagc	tttaaaagct	ttagaaggcg	atgctcaata	cgaagaaaaa	180
atcttagaat	taatgcaagc	agttgatgat	tatattccaa	ctccagaacg	tgactctgat	240
aaaccattca	tgatgccagt	tgaggacgta	ttctcaatca	ctgggtcgtg	tactggtgct	300
acaggccgtg	ttgaacgtgg	tcaaatcaaa	gttgggtgaag	aagttgaaat	tattgggtatc	360
aaagaaactt	ctaaaaacaac	tggtactgg	gtagaaatgt	tccgtaaatt	attagactac	420
gctgaagctg	gtgacaacat	cgggtgcttta	ttacgtgggtg	ttgctcgtga	agatgtataa	480
cgtgggtcaag	tattagctgc	tccagggttca	attacacctc	acacaaaatt	caaagcagac	540
gtatacgttt	tatcaaaaaga	tgaagggtgga	cgtcatactc	cattcttctc	taactatcgt	600
ccacaattct	atttccgtac	tactgacgta	actggtggtg	ttaacttacc	agaagggtact	660
gaaatggtaa	tgctgtggtga	caacgttgaa	at			692

<210> 194

<211> 684

<212> DNA

<213> *Staphylococcus hominis* strain CSG 36

<400> 194

cattcttttta	tcacgtaacg	ttggtgtacc	agcattagta	gtattcttta	acaaagttga	60
catgggttgac	gatgaagaat	tattagaatt	agttgaaatg	gaagtacgtg	acttattatc	120
tgaatacgac	ttcccagggtg	acgacgtacc	tgtaatcgct	ggttcagctt	taaaagcttt	180
agaaggcgat	gctcaatacg	aagaaaaaat	cttagaatta	atgcaagcag	ttgatgatta	240
tattccaact	ccagaacgtg	actctgataa	accattcatg	atgccagttg	aggacgtatt	300
ctcaatcact	ggctcgtggtg	ctggttgctac	aggccgtggt	gaacgtgggtc	aaatcaaagt	360
tgggtgaagaa	ggtgaaatta	ttggttatcaa	agaaacttct	aaaacaactg	ttactgggtg	420
agaaatgttc	cgtaaattat	tagactacgc	tgaagctgg	gacaacatcg	gtgctttatt	480
acgtgggtggt	gctcgtgaag	atgtacaacg	tgggtcaagta	ttagctgctc	caggttcaat	540
tacacctcac	acaaaattca	aagcagacgt	atacgtttta	tcaaaagatg	aagggtggacg	600
tcatactcca	ttcttctcta	actatcgctc	acaattctat	ttccgtacta	ctgacgtaac	660
tgggtgttggt	aacttaccag	aagg				684

<210> 195
<211> 685
<212> DNA
<213> *Staphylococcus hominis* strain CSG 6

<400> 195
accagcatta gtagtattct taaacaaagt tgacatgggt gacgatgaag aattattaga 60
attagttgaa atggaagtac gtgacttatt atctgaatac gacttcccag gtgacgacgt 120
acctgtaatc gctgggttcag ctttaaaagc tttagaaggc gatgctcaat acgaagaaaa 180
aatcttagaa ttaatgcaag cagttgatga ttacattcca actccagaac gtgactctga 240
taaaccattc atgatgccag ttgaggacgt attctcaatc actggctcgtg gtactgttgc 300
tacaggccgt gttgaacgtg gtcaaatcaa agttgggtgaa gaagttgaaa ttattggtat 360
caaagaaact tctaaaacaa ctgttactgg tgtagaaatg ttccgtaaat tattagacta 420
cgctgaagct ggtgacaaca tcggtgcttt attacgtggg gttgctcgtg aagatgtaca 480
acgtgggtcaa gtattagctg ctccagggtc aattacacct cacacaaaat tcaaagcaga 540
cgtatacgtt ttatcaaaaag atgaagggtg acgtcatact ccattcttca ctaactatcg 600
tccacaattc tatttccgta ctactgacgt aactgggtgt gttaacttac cagaaggtac 660
tgaaatggta atgcctggcg acaac 685

<210> 196
<211> 611
<212> DNA
<213> *Staphylococcus hominis* strain CSG 62

<400> 196
gacttattat ctgaatacga cttcccaggt gacgacgtac ctgtaatcgc tgggttcagct 60
ttaaaagctt tagaaggcga tgctcaatac gaagaaaaaa tcttagaatt aatgcaagca 120
gttgatgatt acattccaac tccagaacgt gactctgata aaccattcat gatgccagtt 180
gaggacgtat tctcaatcac tggctcgtggg actgttgcta caggccgtgt tgaacgtggg 240
caaatcaaag ttggtgaaga agttgaaatt attggtatca aagatacttc taaaacaact 300
gttactgggt tagaatgtt ccgtaaatta ttagactacg ctgaagctgg tgacaacatc 360
ggtgctttat tacgtgggtg tgctcgtgaa gatgtacaac gtgggtcaagt attagctgct 420
ccaggttcaa tcacacctca cacaaaattc aaagcagacg tatatgtttt atcaaaagat 480
gaaggtggac gtcatactcc attcttccact aactatcgtc cacaattcta tttccgtact 540
actgacgtaa ctgggtgtgt taacttacca gaaggtactg aaatggtaat gcctggcgac 600
aacgttgaaa t 611

<210> 197
<211> 828
<212> DNA
<213> *Staphylococcus lugdunensis* ATCC 43809

<400> 197
cggcggtatc ttagtagttt ctgctgcaga tgggtccaatg ccacaaactc gtgaacacat 60
tcttttatca cgtaacgttg gtgtgccagc attagtagta ttcttaaaca aagttgacat 120
ggttgacgat gaagaattat tagaattagt agaaatggaa gttcgtgatt tattaactga 180
atatgacttc ccagggtgacg atgtgcctgt aatcgtgggt tcagcattaa aagctttaga 240
aggcgacgaa aaatacgaag ctaaaaatctt agaattaatg gatgcagttg ataactacat 300
tccaactcca gaacgtgact ctgacaaacc attcatgatg ccagttgagg acgtattctc 360
aatcactggg cgtgggtactg ttgctacagg ccgtgttgaa cgtgggtcaaa tcaaagtcgg 420
tgaagaagtt gaaattattg gtatccacga tactactaaa acaactgtta ctgggtgtaga 480
aatgttccgt aaattattag actacgttga agctgggtgac aacatcgggtg cgttattacg 540
tggtgttgct cgtgaagatg tacaacgtgg acaagtatta gctgctccag gttcaattac 600
acctcacact aaattttaaag ctgacgtata tgttttatct aaagatgaag gtggacgtca 660
tacaccattc ttctcaaaact accgcccaca attctatttc cgtactacag acgtaactgg 720
tggtgttaac ttaccagaag gtacagaaat gtttatgcct ggcgacaacg ttgaaatgac 780
agttgaatta atcgtctcaa tcgctatcga agacggaact cgtttctc 828

<210> 198
<211> 690
<212> DNA
<213> *Staphylococcus saprophyticus* ATCC 35552

<400> 198
agtagtatct gctgctgatg gcccaatgcc acaaactcgt gaacacattc ttttatcacg 60
taacgttggg gttccagcat tagttgtatt cttaaacaag gttgacatgg ttgacgatga 120
agaattatta gaattagtag aaatggaagt tcgtgactta ttaagcgaat atgacttccc 180
aggtagacat gtacctgtaa tctctgggtc tgcattaaaa gctttagaag gcgacgctga 240
ctatgagcaa aaaatcttag acttaatgca agctgttgat gacttcattc caacaccaga 300
acgtgattct gacaaacccat tcatgatgcc agttgaggac gtattctcaa tcaactggtc 360
tggtactggt gctacaggcc gtgttgaacg tgggtcaaac aaagtccgtg aagaaatcga 420
aatcatcggt atgcaagaag aatcaagcaa aacaactggt actggtgtag aaatgttccg 480
taaattatta gactacgctg aagctggtga caacattggt gcattattac gtggtgtttc 540
acgtgatgac gtacaacgtg gtcaagtttt agctgctcct ggtactatta caccacatac 600
aaaattcaaa gcggatgttt acgtttttatc taaagatgaa ggtggtcgtc atacaccatt 660
cttcactaac taccgcccac aattctattt 690

<210> 199

<211> 723

<212> DNA

<213> Staphylococcus saprophyticus strain CSG 83

<400> 199
gcattagttg tattctttaa caaagttgac atggttgacg atgaagaatt attagaatta 60
gtagaaatgg aagttcgtga tttattaagc gaatatgact tcccagggtga cgatgtacct 120
gtaattctctg gttctgcatt aaaagcttta gaaggcgacg ctgactatga gcaaaaaatc 180
ttagacttaa tgcaagctgt tgatgacttc attccaacac cagaacgtga ttctgacaaa 240
ccattcatga tgccagttga ggacgtattc tcaatcactg gtcgtggtac tgttgctaca 300
ggcgtggtg aacgtggtca aatcaaagtc ggtgaagaaa tcgaaatcat cggtatgcaa 360
gaagaatcaa gcaaaacaac tgttactggg ttagaaatgt tccgtaaatt attagactac 420
gctgaagctg gtgacaacat tgggtgcatta ttacgtggtg tttcacgtga tgacgtacaa 480
cgtgggtcaag ttttagctgc tctgtgtact atacaccac atacaaaatt caaagcggat 540
gtttacgttt tatctaaaga tgaagtggtg cgtcatcac cttctttcac taactaccgc 600
ccacaattct atttccgtac tactgacgta actggtggtg ttaacttacc agaaggtact 660
gaaatgggta tgccctggcg taacgttgaa atggatgttg aattaatttc tccaatcgct 720
att 723

<210> 200

<211> 697

<212> DNA

<213> Staphylococcus saprophyticus strain CSsa 18

<400> 200
cggtggtggt ccagcattag ttgtattctt aaacaaagtt gacatggttg acgatgaaga 60
attattagaa ttagtagaaa tggaagttcg tgacttatta agcgaatatg acttcccagg 120
tgacgatgta cctgtaatct ctggttctgc attaaaagct ttagaaggcg acgctgacta 180
tgagcaaaaa atcttagact taatgcaagc tgttgatgac ttcatccaa caccagaacg 240
tgattctgac aaaccattca tgatgccagt tgaggacgta ttctcaatca ctggtcgtgg 300
tactgttgct acaggccgtg ttgaacgtgg tcaaatcaaa gtcggtgaag aaatcgaaat 360
catcggtatg caagaagaat caagcaaaa aactgttact ggtgtagaaa tgttccgtaa 420
attattagac tacgtggaag ctggtgacaa cattggtgca ttattacgtg gtgtttcacg 480
tgatgacgta caacgtggtc aagtttttagc tgctcctggt actattacac cacatacaaa 540
attcaaagcg gatgtttacg ttttatctaa agatgaaggt ggtcgtcata caccattctt 600
cactaactac cgcccacaat tctatttccg tactactgac gtaactggtg ttgttaactt 660
accagaaggt actgaaatgg ttatgcctgg cgataac 697

<210> 201

<211> 835

<212> DNA

<213> Staphylococcus sciuri subsp. sciuri ATCC 29060

<400> 201
cggcggtatc ttagtagtat ctgctgctga cggtccaatg cctcaaactc gtgagcacat 60
tcttttatca cgtaacgtag gtgttcctgc attagtagta ttcttaaaca aagttgacat 120
gggtgacgat gaagaattat tagaattagt tgaaatggaa gttcgtgact tattatctga 180
atatgacttc ccaggcgacg acgttcctgt aattgctggt tcagcattaa aagcattaga 240

```

aggcgacgaa gcttacgaag acaaaatcat ggaattaatg gatgctgttg atacattcat 300
cccaactcca gaacgtgact ctgacaaacc attcatgatg ccagttgagg acgtattctc 360
aatcactggg cgtggtactg ttgctacagg ccgtgttgaa cgtggtcaaa tctactgttg 420
tgaagaagtt gaaatcatcg gtttaactga agaactcttct aaaacaactg taactgggtg 480
tgaaatgttc cgtaaattat tagacttcgc tgaagctgga gataacatcg gtgcattatt 540
acgtggtggt gctcgtgaag acgttaaccg tgggtcaagta ttagctaaac caggttcaat 600
cacacctcac actaaattca aagctgaagt ttatgtatta tctaaagacg aagggtggacg 660
tcatactcca ttcttcacaa actaccgcc acaattctat ttccgtacta ctgacgtaac 720
tggtgtagtt aacttaccag aagggtactga aatggttatg cctggcgaca acgttgaaat 780
ggacgttgaa ttaatttcac caatcgctat tgaagacggt atcgtttctc aatca 835

```

<210> 202

<211> 831

<212> DNA

<213> *Staphylococcus warneri* ATCC 27836

<400> 202

```

cggcggtatc ttagttgtat ctgcagctga tgggtccaatg ccacaaactc gtgaacacat 60
tcttttatca cgtaacgttg gtgtaccagc ttagttgta ttcttaaaca aagttgatat 120
ggtagacgac gaagaattat tagaattagt agaaatggaa gttcgtgact tattatctga 180
atatgacttc ccaggtgacg acgtacctgt aatcgctggt tcagcattaa aagctttaga 240
aggcgacgaa aaatacgaag aaaaaatctt agaattaatg caagcagttg atgactacat 300
tccaactcca gaacgtgatt ctgacaaacc attcatgatg ccagttgagg acgtattctc 360
aatcactggg cgtggtactg ttgctacagg ccgtgttgaa cgtggtcaaa tcaaagttgg 420
tgaagaagtt gaaatcatcg gtttacatga cacttctaaa acaactgtta ctggtgtaga 480
aatgttccgt aagttattag actacgctga agctggtgac aacatcggtg ctttattacg 540
tggtgttgct cgtgaagacg tacaacgtgg tcaagtatta gctgctcctg gttcaattac 600
accacataca aaattcaaag cggaagttta cgttttatct aaagacgaag gtggacgtca 660
cactccattc ttcagtaact accgcccaca attctatttc cgtactactg acgtaactgg 720
cgttgttcaa ttaccagaag gtactgaaat ggttatgcct ggtgataacg ttgaaatgac 780
agtagaatta atcgctccta tcgcgattga agacgggtact cgtttctcaa c 831

```

<210> 203

<211> 829

<212> DNA

<213> *Staphylococcus warneri* strain CSG 50

<400> 203

```

cggcggtatc ttagttgtat ctgcagctga tgggtccaatg ccacaaactc gtgaacacat 60
tcttttatca cgtaacgttg gtgtaccagc ttagttgta ttcttaaaca aagttgatat 120
ggtagacgac gaagaattat tagaattagt agaaatggaa gttcgtgact tattatctga 180
atatgacttc ccaggtgacg acgtacctgt aatcgctggt tcagcattaa aagctttaga 240
aggcgacgaa aaatacgaag aaaaaatctt agaattaatg caagcagttg atgactacat 300
tccaactcca gaacgtgatt ctgacaaacc attcatgatg ccagttgagg acgtattctc 360
aatcactggg cgtggtactg ttgctacagg ccgtgttgaa cgtggtcaaa tcaaagttgg 420
tgaagaagtt gaaatcatcg gtttacatga cacttctaaa acaactgtta ctggtgtaga 480
aatgttccgt aagttattag actacgctga agctggtgac aacatcggtg ctttattacg 540
tggtgttgct cgtgaagacg tacaacgtgg tcaagtatta gctgctcctg gttcaattac 600
accacataca aaattcaaag cggaagttta cgttttatct aaagacgaag gtggacgtca 660
cactccattc ttcagtaact accgcccaca attctatttc cgtactactg acgtaactgg 720
cgttgttcaa ttaccagaag gtactgaaat ggttatgcct ggtgataacg ttgaaatgac 780
agtagaatta atcgctccta tcgcgattga agacgggtact cgtttctca 829

```

<210> 204

<211> 839

<212> DNA

<213> *Bifidobacterium longum* ATCC 15707

<400> 204

```

tggcgctatc ctcggtgttg ccgccaccga cggcccgatg gccagactc gcgagcacgt 60
gctgctcgcc cgctcagggtg gcgttccgaa gatcctcgtc gccctgaaca agtgcgacat 120
ggtcgacgat gaagagctca tcgagctcgt cgaagaagag gtccgcgacc tctcgcacga 180
gaacggcttc gaccgtgact gcccggtcat ccacacctcc gcttacgggtg ctctgcacga 240

```

```

cgacgctccg gaccacgaga agtgggtcca gtccgttaag gacctcatgg acgctgtcga 300
cgactacatc ccgaccccggt ttcacgacct ggacaagccg ttcctgatgc cgatcgagga 360
cgtcttcacc atctccggcc gtgggtaccgt tgtcaccggt cgtgtcgagc gtggccagct 420
ggccgtcaac accccgggtcg agatcggttg tatccgtccg acccagcaga ccaccgtcac 480
ctccatcgag accttccaca agaccatgga cgctcgagc gctggcgaca acaccggtct 540
gcttctgcgt ggtctcggcc gtgacgatgt cgagcgtggc caggttgtgg ccaagccggg 600
ctccgtcacc ccgcacacca agttcgaggg cgaagtctac gtgctgacca aggacgaagg 660
cgccgtcac tcgccgttct tctccaaacta ccgtccgcag ttctacttcc gcaccaccga 720
cgtcaccggc gtcacgcagc tgccggaagg cgtcgagatg gttcagccgg gcgaccacgc 780
taccttcacc gttgagctga ttcagcccat cgctatggag gaaggcctga ccttcgctg 839

```

<210> 205

<211> 754

<212> DNA

<213> *Stenotrophomonas maltophilia* strain CDC F3338

<400> 205

```

cggcgcgata ctggtgtgct cggccgctga cggcccgatg ccgcagaccc gtgagcacat 60
cctgtgtgct cgccagggtcg gcgtgcccga catcgctcgt ttcctgaaca aggccgacat 120
ggtcgacgac gccgagctgc tcgagctggt cgagatggaa gtgcgcgaac tgcgtgagcaa 180
gtacgagttc ccgggcgacg acaccccgat catcgccggt tcggcccgcc tggcgctgga 240
aggcgaccag agcgacatcg gcgtgcccgc catcctgaag ctggtcgacg cgctggacag 300
ctggattccg gagccggagc gtgcgatcga caagccgttc ctgatgccgg tggaagacgt 360
gttctcgatc tcgggcccgc gcaccgtggt gaccggtcgt atcgagcgcg gcgtgatcaa 420
ggttggcgac gaaatcgaaa tcgtcggcat ccgtccggtg cagaagacca ccgtgaccgg 480
cgttgaaatg ttccgcgaag tgctggacca gggtcaggca ggcgacaacg ctggcctgct 540
gctgcgcggc accaagcgtg atgacgtcga gcgtggccag gtgctggcca agccggggcac 600
gatcaagccg cacaccaagt tcgaaggcga agtgtacgtc ctgtcgaagg acgagggcgg 660
ccgccacacc ccgttcttca acggctaccg tccgcagttc tacttccgca ccaccgacat 720
caccggcgcc gctgcactgc cgaaggcgt cgaa 754

```

<210> 206

<211> 835

<212> DNA

<213> *Streptococcus acidominimus* ATCC 51726

<400> 206

```

tggtgctatc cttgtagtag cttcaactga cggaccaatg ccacaaactc gtgagcacat 60
ccttctttca cgtcaagtgt gtgttaaaaa ccttatcggt ttcataaaca aagttgacct 120
tggtgatgat gaagaattgc ttgaattggt tgaaatggaa atccgtgacc ttctttcaga 180
atacgatttc ccagggtgat atcttccagt tgttcaagggt tcagctctta aagcgcttga 240
agggtattca gcacaagaag atgttatcat ggaattgatg tcaatcgttg acacatacat 300
tccagaacca gaacgtgata ctgacaaacc attgcttctt ccagtcgagg atgtattctc 360
aatcactgga cgtggtactg ttgcttcagg acgtatcgac cgtggtactg ttaaagttaa 420
tgacgaagtt gaaatcgttg gtatcaaaga cgaaatctct aaagcagttg ttactgggtg 480
tgaaatgttc cgtaaacacac ttgacgaagg tcttgctgga gataacgttg gtgttcttct 540
tcgtggtgta caacgtgatg aaatcgaacg tggctcaagt cttgctaaac caggttcaat 600
caaccacac actaaattca aaggtgaagt ttacgttctt tctaaagaag aaggtggacg 660
tcacactcca ttcttcgata actaccgtcc tcagttctac ttccgtacaa ctgacgtaac 720
tggttcaatc aaattgccag aagggtactga aatggtaatg cctggtgata acgtaactat 780
cgaagttgag ttgateccac caatcgccgt tgaacaagggt actactttct ctatc 835

```

<210> 207

<211> 819

<212> DNA

<213> *Streptococcus agalactiae* ATCC 12403

<400> 207

```

ctatccttgt agttgcttca actgatggac caatgccaca aactcgtgag cacatccttc 60
tttcacgtca agttgggtgt aaacacctta tcgtattcat gaacaaagtt gaccttggtg 120
atgatgaaga attgcttgaa ttgggttgaaa tggaaattcg tgaccttctt tcagaatacg 180
acttcccagg tgatgacctt ccagttatcc aaggttcagc tcttaaagca cttgaaggcg 240
acgaaaaata cgaagacatc atcatggaat tgatgagcac tggtgatgag tacattccag 300

```


aaccagaacg	tgatactgac	aaacctttac	ttcttccagt	tgaagatgta	ttctcaatca	360
ctggacgtgg	tacagttgct	tcaggacgta	tcgaccgtgg	tactgttcgt	gtcaacgacg	420
aagttgaaat	cgttggtatt	aaagaagata	tccaaaaagc	agttgttact	ggtgttgaaa	480
tgttccgtaa	acaacttgac	gaaggtcctg	caggggacaa	cgttggtggt	cttcttcgtg	540
gtgttcaacg	tgatgaaatc	gaacgtggtc	aagttcttgc	taaaccaggt	tcaatcaacc	600
cacacactaa	atttaaagggt	gaagtttaca	tcctttctaa	agaagaagggt	ggacgtcata	660
ctccattctt	caacaactac	cgtccacaat	tctacttccg	tacaactgac	gtaacaggtt	720
caatcgaact	tccagcagga	acagaaatgg	ttatgcctgg	tgataacggt	actatcgaag	780
ttgaattgat	tcacccaatc	gccgtagaac	aaggtacta			819

<210> 208

<211> 819

<212> DNA

<213> Streptococcus agalactiae ATCC 12973

<400> 208

ctatccttgt	agttgcttca	actgatggac	caatgccaca	aactcgtgag	cacatccttc	60
tttcacgtca	agttgggtgtt	aaacacctta	tcgtattcat	gaacaaaagtt	gaccttggtg	120
atgatgaaga	attgcttgaa	ttgggtgaaa	tggaaattcg	tgaccttctt	tcagaatacg	180
actttccagg	tgatgacctt	ccagttatcc	aaggttcagc	tcttaaagca	cttgaaggcg	240
atgaaaaata	cgaagacatc	atcatggaat	tgatgagcac	tggtgatgag	tacattccag	300
aaccagaacg	tgatactgac	aaacctttac	ttcttccagt	cgaagatgta	ttctcaatca	360
ctggacgtgg	tacagttgct	tcaggacgta	tcgaccgtgg	tactgttcgt	gtcaacgacg	420
aagttgaaat	cgttggtatt	aaagaagata	tccaaaaagc	agttgttact	ggtgttgaaa	480
tgttccgtaa	acaacttgac	gaaggtcctg	caggggacaa	cgttggtggt	cttcttcgtg	540
gtgttcaacg	tgatgaaatc	gaacgtggtc	aagttcttgc	taaaccaggt	tcaatcaacc	600
cacacactaa	atttaaagggt	gaagtttaca	tcctttctaa	agaagaagggt	ggacgtcata	660
ctccattctt	caacaactac	cgtccacaat	tctacttccg	tacaactgac	gtaacaggtt	720
caatcgaact	tccagcagga	acagaaatgg	ttatgcctgg	tgataacggt	actatcgaag	780
ttgaattgat	tcacccaatc	gccgtagaac	aaggtacta			819

<210> 209

<211> 822

<212> DNA

<213> Streptococcus agalactiae ATCC 13813

<400> 209

agctatcctt	gtagttgctt	caactgatgg	accaatgcca	caaactcgtg	agcacatcct	60
tctttcacgt	caagttggtg	ttaaacacct	tatcgatttc	atgaacaaaag	ttgaccttgt	120
tgatgatgaa	gaattgcttg	aattgggtga	aatggaaatt	cgtgaccttc	tttcagaata	180
cgacttccca	ggtgatgacc	ttccagttat	ccaaggttca	gctcttaaag	cacttgaagg	240
cgatgaaaaa	tacgaagaca	tcatcatgga	attgatgagc	actggtgatg	agtacattcc	300
agaaccagaa	cgtgatactg	acaaaccttt	acttcttcca	gtcgaagatg	tattctcaat	360
cactggacgt	ggtacagttg	cttcaggacg	tatcgaccgt	ggtactgttc	gtgtcaacga	420
cgaagttgaa	atcgttggtg	ttaaagaaga	tatccaaaaa	gcagttgtta	ctgggtgttg	480
aatgtttccg	aaacaacttg	acgaaggtct	tgcaggggac	aacgttggtg	ttcttcttcg	540
tggtgttcaa	cgtgatgaaa	tcgaacgtgg	tcaagttctt	gctaaaccag	gttcaatcaa	600
cccacacact	aaatttaaag	gtgaagttta	cattctttct	aaagaagaag	gtggacgtca	660
tactccattc	ttcaacaact	accgtccaca	attctacttc	cgtacaactg	acgtaacagg	720
ttcaatcgaa	cttccagcag	gaacagaaat	ggttatgcct	ggtgataacg	ttactatcga	780
agttgaattg	attcacccaa	tcgccgtaga	acaaggtact	ac		822

<210> 210

<211> 825

<212> DNA

<213> Streptococcus agalactiae strain CDCss-1073

<400> 210

cggagctatc	cttgtagttg	cttcaactga	tggaccaatg	ccacaaactc	gtgagcacat	60
ccttctttca	cgtcaagttg	gtgttaaaca	ccttatcgta	ttcatgaaca	aagttgacct	120
tgttgatgat	gaagaattgc	ttgaattggt	tgaaattggaa	attcgtgacc	ttctttcaga	180
atagcacttc	ccaggtgatg	accttccagg	tatccaagggt	tcagctctta	aagcacttga	240
aggcgacgaa	aaatacgaag	acatcatcat	ggaattgatg	agcactgttg	atgagtacat	300

```
tccagaacca gaacgtgata ctgacaaacc tttactttctt ccagttgaag atgtattctc 360
aatcactgga cgtggtacag ttgcttcagg acgtatcgac cgtggtactg ttctgtgtcaa 420
cgacgaagtt gaaatcgttg gtattaaaga agatatccaa aaagcagttg ttactggtgt 480
tgaaatgttc cgtaaacaac ttgacgaagg tcttgccagg gacaacggtg gtgttcttct 540
tcgtggtgtt caacgtgatg aaatcgaacg tgggtcaagtt cttgctaaac caggttcaat 600
caaccacac actaaattta aaggtgaagt ttacatcctt tctaaagaag aaggtggacg 660
tcatactcca ttcttcaaca actaccgtcc acaattctac ttccgtacaa ctgacgtaac 720
aggttcaatc gaacttccag caggaacaga aatgggttatg cctggtgata acgttactat 780
cgaagttgaa ttgattcacc caatcgccgt agaacaaggt actac 825
```

<210> 211
<211> 826
<212> DNA
<213> Streptococcus anginosus ATCC 33397

```
<400> 211
ggagctatcc ttgtagtagc ttcaactgac ggaccaatgc ctcaaactcg tgaacacatc 60
cttctttcac gccaaagtagg tgttaaatac cttatcgctt tcatgaataa agttgacttg 120
ggtgacgatg aagaattgct tgaattgggt gaaatggaaa tccgtgacct tctttcagaa 180
tacgatttcc caggtgatga aatcccagtt atccaaggtt cagctcttaa agctcttgaa 240
ggtgatgaaa aatatgaaga catcatcatg gaattgatgg atactgttga tgaatacatt 300
ccagaaccag aacgtgacac tgacaaacca ttgcttcttc cagttgaaga tgtattctca 360
attactggac gtggtactgt tgcttcagga cgtatcgacc gtggtactgt taaagtcaac 420
gacgaagttg aaatcggttg tatccgtgat gaaatccaaa aagcagttgt tactggtgtt 480
gaaatgttcc gtaaacaatt ggacgaaggt cttgctggag ataacgtagg ggttcttctt 540
cgtggtatcc aacgtgacga aatcgaacgt ggacaagttc ttgctaaacc aggttcaatt 600
catccacaca ctaaattcaa aggtgaagtt tacatcctta ctaaagaaga aggtggacgt 660
catactccat tcttcaacaa ctaccgtcct caattctact tccgtactac agacgttaca 720
ggttcaatcg aacttccctgc aggtactgaa atggtaatgc ctggtgataa cgtaacaatc 780
gacgttgaat tgatccaccc aattgccgta gaacaaggaa ctacat 826
```

<210> 212
<211> 827
<212> DNA
<213> Streptococcus bovis ATCC 33317

```
<400> 212
tggtgctatc cttgtagtag cttctacaga tgggtccaatg ccacaaacac gtgaacacat 60
ccttctttca cgtcaagttg gtgttaaaca ccttatcgtc ttcatagaaca aagttgacct 120
tggtgatgac gaagaattgc ttgaattgggt tgaatggaaa atccgtgacc ttctttcaga 180
atatgatttc ccaggtgatg aaatccctgt aatccaaggt tcagctctta aagcccttga 240
aggtagacct cactacgaag acatcatcat ggaattgatg aacactgtag atgaatacat 300
tccgaacca aaacgtgata ctgacaaacc attgcttctt ccagtcgaag acgtattctc 360
aatcactgggt cgtggtactg tagcatcagg acgtatcgac cgtggtactg ttaaagtcaa 420
cgacgaagtt gaaatcgttg gtatccgtga cgacatccaa aaagctggtg ttactggtgt 480
tgaaatgttc cgtaaacaac ttgatgaagg tatcgagggt gataacggtg gtgttcttct 540
tcgtggtatc caacgtgatg aaatcgaacg tgggtcaagtt cttgctaaac caggttcaat 600
ccaccacac actaaattca aaggtgaagt ttacatcctt actaaagaag aaggtggacg 660
tcacactcca ttcttcaaca actaccgtcc tcaattctac ttccgtacaa ctgacgttac 720
aggttcaatc gaacttccag caggtactga aatggtaatg cctggtgata acgttactat 780
cgacgttgaa ttgattcacc caatcgccgt tgaacaaggt actacat 827
```

<210> 213
<211> 821
<212> DNA
<213> Streptococcus anginosus ATCC 27823

```
<400> 213
gctatcctcg tagtagcttc aactgatgga ccaatgcctc aaactcgtga acatatacctt 60
ctttcacgct aagtaggtgt taaatacctt atcgtcttca tgaacaaaagt tgacttggtt 120
gacgatgaag aattgcttga attggttgaa atggaaatcc gtgaccttct ttcagaatac 180
gatttcccag gtgatgaaat cccagttatc caaggttcag ctcttaaagc tcttgaaggt 240
gatgaaaaat atgaagacat catcatggaa ttgatggata ctgttgatga atacattcca 300
```

```
gaaccagaac  gtgacactga  caaaccactt  cttcttccag  tcgaagatgt  attctcaatc  360
actggacgtg  gtactggtgc  ttcaggacgt  atcgaccgtg  gtactgttaa  agtcaatgat  420
gaagttgaaa  ttgttggtat  tcgtgacgaa  atccaaaaag  cagttgttac  tgggtgttgaa  480
atgttccgta  aacaattgga  cgaaggctct  gctggagata  acgtaggggt  tcttcttcgt  540
ggtatccaac  gtgacgaaat  cgaacgtgga  caagttcttg  ctaaaccagg  ttcaattcat  600
ccacacacta  aattcaaagg  tgaagtttac  atccttacta  aagaagaagg  tggacgtcat  660
actccattct  tcaacaacta  ccgctcctca  ttctacttcc  gtactacaga  cgttacaggt  720
tcaatcgaac  ttctgcagg  tactgaaatg  gtaatgcctg  gtgataacgt  aacaattgat  780
gttgagttga  tccacccaat  tgccgtagaa  caaggaacta  c  821
```

<210> 214

<211> 821

<212> DNA

<213> *Streptococcus cricetus* ATCC 19642

<400> 214

```
gctatccttg  tagtagcttc  tacagacgga  ccaatgccac  aaactcgtga  acacatcttg  60
ctttcacgcc  aagttggtgt  taagagcctt  atcgtcttca  tgaacaaggt  tgacttggtt  120
gacgatgaag  aattgcttga  attggttgaa  atggaaatcc  gtgatcttct  ttcagaatac  180
gatttcccag  gtgatgatat  ccctgttctt  caagggtcag  ctcttaaagc  ccttgaaggt  240
gatacagctg  ccgaagacaa  gatcatggaa  ttgatggaca  tcggttgatga  ctacattcca  300
gaacccaaac  gtgatactga  taagccattg  cttcttccag  tcgaagacgt  attctcaatc  360
actggacgtg  gtactggtgc  ttcaggacgt  atcgaccgtg  gtactgttaa  ggtcaatgac  420
gaagttgaaa  tcgttggtat  caaggacgaa  atccaaaaag  cggttgttac  cggagttgaa  480
atgttccgta  aacaattgga  tgaaggtctt  gcaggggata  acggttggtg  gcttcttcgt  540
ggtatccaac  gtgatgaaat  cgaacgtggg  caagtattgg  ctgcacctgg  ttcaatccat  600
ccacacacta  aattcaaggg  tgaagtttac  atcctttcta  aagatgaagg  tggacgtcac  660
actccattct  tcaacaacta  ccgtccacag  ttctacttcc  gtacaactga  cgtaactggg  720
tcaatcgaat  tgccagcagg  tactgaaatg  gttatgcctg  gtgataacgt  tactatcgac  780
gttgaattga  tccacccaat  cgctgttgaa  aaaggtacta  c  821
```

<210> 215

<211> 821

<212> DNA

<213> *Streptococcus cristatus* ATCC 51100

<400> 215

```
tatccttgta  gtagcttcaa  ctgacggacc  aatgccacaa  actcgtgagc  acatccttct  60
ttcacgtcag  gttggtgtta  aacaccttat  cgtcttcatg  aacaagatcg  acttggttga  120
tgacgaagaa  ttgcttgaat  tggttgaaat  ggaaatccgt  gacctcttgt  cagaatacga  180
cttcccagggt  gacgatcttc  cagttatcca  aggttcagct  cttaaagctc  ttgaagggtga  240
tactaagtac  gaagacatca  tcatggaatt  gatgaacact  gttgatgagt  acatcccaga  300
accagaacgt  gatactgaca  aacctcttct  tcttccagtc  gaagacgtat  tctcaatcac  360
tggtcgtggt  acagttgctt  caggacgtat  cgaccgtggg  actgttctgt  tcaacgatga  420
aatcgaaatc  gttggtatca  aagaagaaat  ccaaaaagca  gttgttactg  gtggttgaaat  480
gttccgtaaa  cagcttgacg  aaggtcttgc  aggggacaa  gtaggtgtac  ttcttcgtgg  540
tatccaacgt  gatgaaatcg  aacgtgggtc  agttatcgct  aaaccagggt  caatcaacct  600
acacactaaa  ttcaagggtg  aagtttacat  ccttactaaa  gaagaagggt  gacgtcacac  660
tccattcttc  aacaactacc  gtccacagtt  ctacttccgt  acaactgacg  ttacaggttc  720
aatcgaactt  ccagcaggtg  ctgaaatggg  aatgcctggt  gataacgtaa  ctatcgacgt  780
tgagttgatc  cacccaatcg  ccgttgaaca  aggtactcct  t  821
```

<210> 216

<211> 792

<212> DNA

<213> *Streptococcus downei* ATCC 33748

<400> 216

```
agtagcttct  actgatggac  caatgccaca  aactcgtgaa  cacatcttgc  tttcacgtca  60
ggttggtggt  aagaacctta  tcgtcttcat  gaacaagggt  gacttggttg  acgatgaaga  120
attgcttgaa  ttggttgaaa  tggaaatccg  tgacctgctt  tcagaatacg  atttcccagg  180
tgatgatatc  cctgttggtc  aagggttcagc  tcttaaggct  cttgaagggt  atacagctgc  240
cgaagacaag  atcatggaat  tgatggacat  cgttgatgac  tacattccag  aacccaaacg  300
```

```

tgatactgat aagcctttgc ttcttccagt cgaagatgta ttctcaatca ctggacgtgg 360
tactgtagct tcaggacgta tcgaccgtgg tactgttaag gtcaacgacg aagttgaaat 420
cgttgggtatc aaggacgaaa tccaaaaagc agttgttacc ggagttgaaa tgttccgtaa 480
acaattggac gaaggtcttg caggggataa cgttgggtgtg cttcttcgtg gtatccaacg 540
tgatgaaatc gaacgtggtc aagtgttggc tgcgcctggc tcgattcacc cacacactaa 600
gtttaaaggt gaagtttaca tcctttctaa agaagaaggt ggacgtcata ctccattctt 660
taacaactac cgtccacagt tctacttccg tacaactgac gtaactgggt caatcgaatt 720
gccagcgggt actgaaatgg ttatgcctgg tgataacgtt actatcgacg ttgaattgat 780
ccaccaatt gc 792

```

<210> 217
 <211> 795
 <212> DNA
 <213> *Streptococcus dysgalactiae* ATCC 43078

```

<400> 217
gtagttgctt caacagacgg accaatgcca caaactcgtg agcacatcct cctttcacgt 60
caggttggtg ttaaaccact tatcgtgttc atgaacaaaa ttgacctgtg tgacgatgaa 120
gaattgcttg aattgggttg aatggaaatc cgtgaccttc ttccagaata cgatttccca 180
gggtgatgacc ttccagttat ccaagggttca gctcttaaag ctcttgaagg cgacactaaa 240
tttgaagaca tcatcatgga attgatggat actgttgatt catacattcc agaaccagaa 300
cgtgacactg acaaaccatt gcttcttcca gtcgaagacg tattctcaat cacagggtcgt 360
gggtacagttg cttcaggacg tatcgaccgt ggtactgttc gtgtcaacga cgaaatcgaa 420
atcgtttggt tcaaagaaga aactaaaaaa gctgttggtt ctggtgttga aatgttccgt 480
aaacaacttg acgaaggtct tgcaggagac aacgtaggta tccttcttcg tgggtgttcaa 540
cgtgacgaaa tcgaacgtgg tcaagttatt gctaaaccag gttcaatcaa cccacacact 600
aaattcaaag gtgaagtata tatcctttct aaagacgaag gtggacgtca cactccattc 660
ttcaacaact atcgtccaca attctacttc cgtacaactg acgtaacagg ttcaatcgaa 720
cttccagctg gtacagaaat gggtatgcct ggtgataacg tgacaatcaa cgttgagttg 780
atccacccaa tcgcc 795

```

<210> 218
 <211> 828
 <212> DNA
 <213> *Streptococcus equi* subsp. *equi* ATCC 9528

```

<400> 218
cggagctatc cttgtagttg cttcaactga cggaccaatg ccacaaactc gtgagcacat 60
ccttctttca cgtcaggttg gtgttaagca ccttatcgtg ttcatgaaca aggttgacct 120
tggtgacgat gaagaattgc ttgagcttgt tgaaatggaa attcgtgacc ttctttcaga 180
atatgatttc ccagggtgat accttccagt tatccaaggt tcagcgctta aggctcttga 240
aggcgacagc aaatacgaag atatcatcat ggaattgatg gatactgttg attcatacat 300
tccagaacca gaacgtgaca cagacaagcc attgttcttc ccagtcgagg acgtattctc 360
aatcactgga cgtggtactg ttgcttcagg acgtatcgac cgcggtactg ttcgtgttaa 420
cgacgaaatc gaaatcgttg gtatcagaga cgagatcaaa aaagcagttg ttactgggtg 480
cgaaatgttc cgtaaacagc ttgacgaagg tcttgcaggg gacaacgttg gtgttcttct 540
tcgtgggtga caacgtgat aaatcgaacg tgggtcaagtt attgctaagc caggttctat 600
caaccacac actaaattta aaggtgaagt atatatcctt actaaagaag aaggtggacg 660
tcacacacca ttcttcaaca actatcgtcc acaattctac ttccgtacta ctgacgtaac 720
aggttcaatc gagcttccag caggtacaga aatgggttatg cctgggtgata acgtgactat 780
tgacgttgag ttgatccacc caatcgccgt agaacaaggt actacatt 828

```

<210> 219
 <211> 825
 <212> DNA
 <213> *Streptococcus ferus* ATCC 33477

```

<400> 219
cgggtgcaatc cttgtagtag cttctacaga tggaccaatg ccacaaactc gtgagcacat 60
ccttctttca cgtcaggttg gtgttaaaaca ccttatcgtc ttcatgaaca aagttgacct 120
gggtgacgat gaagaattgc ttgaattggc tgaaatggaa atccgtgacc tgctttcaga 180
atatgatttc ccagggtgat accttccagt tatccaaggt tcagctctta aagcgttga 240
aggtgatact gctcaagaag atgttatcat ggaattgatg aaaaccgttg atgagtacat 300

```

cccagaacca	gaacgtgata	ctgacaaaacc	attgcttctt	ccagtcgaag	atgtattctc	360
aatcacaggt	cgtggtactg	tagcttcagg	acgtatcgat	cgtggtactg	taagagtcac	420
cgatgaagtt	gaaatcgttg	gtatcaaaga	cgaaatcact	aaagcagttg	ttaccggtgt	480
tgaaatgttc	cgtaaacaat	tggacgaagg	tcttgctggg	gataacgttg	gtgtgcttct	540
ccgtggtgtg	caacgtgatg	aaatcgaacg	tgggtcaagta	ttggctaaac	caggttcaat	600
caacccacac	actaaattta	aagggtgaagt	ttacatcctt	actaaagaag	aagggtggacg	660
tcatacacca	ttcttcaaca	actaccgtcc	acagttctac	ttccgtacaa	ctgacgtaac	720
tgggttcaatc	gaattgccag	caggtactga	aatgggttatg	cctgggtgata	acgtgactat	780
cgacgttgaa	ttgatccacc	caatcgccgt	tgaacaaggt	actac		825

<210> 220

<211> 826

<212> DNA

<213> *Streptococcus gordonii* ATCC 10558

<400> 220

cggagctatc	cttgtagtag	cttcaactga	tggctctatg	ccacaaaactc	gtgagcacat	60
ccttctctca	cgccaagttg	gtgttaaaca	cttgatcgtg	ttcatgaaca	aagttgactt	120
gggtgacgat	gaagaattgc	ttgagttggt	tgaatggaa	atccgtgacc	tcttgtcaga	180
atacgacttc	ccaggtgacg	atcttccagt	tatccaaggt	tcagctctta	aagctcttga	240
aggtgactct	aaatatgaag	atatcatcat	ggaattgatg	aacactggtg	atgagtacat	300
cccagaacca	gaacgcgaca	ctgacaaaacc	attgcttctt	ccagtcgaag	acgtattctc	360
aatcactgga	cgtggtacag	ttgcttcagg	acgtatcgac	cgtggtatcg	ttaaagtcaa	420
tgacgaaatc	gaaatcgttg	gtatcaaaga	agaaatccaa	aaagcagttg	ttactggtgt	480
tgaatgttgc	cgtaaacagc	ttgacgaagg	tcttgacagg	gacaacgttg	gtgtgcttct	540
tcgtggtatc	caacgtgatg	aaatcgaacg	tggacaagtt	attgctaaac	caggttcaat	600
caacccacac	actaaattca	aagggtgaagt	ttatatcctt	actaaagaag	aagggtggacg	660
tcacactcca	ttcttcaaca	actaccgtcc	acagttctac	ttccgtacaa	ctgacgttac	720
aggttcaatc	gaacttccag	caggtactga	aatggtaatg	cctgggtgata	acgtaactat	780
cgacgttgag	ttgatccacc	caatcgccgt	tgaacaaggt	actact		826

<210> 221

<211> 799

<212> DNA

<213> *Streptococcus anginosus* ATCC 27335

<400> 221

tgtagtagct	tcaactgacg	gaccaatgcc	tcaaaactcgt	gaacatatcc	ttcttttcacg	60
tcaagtaggt	gttaaataacc	ttattgtctt	catgaacaaa	gttgacttgg	ttgacgatga	120
agaattgctt	gaattgggtg	aaatggaaat	ccgtgatctt	ccttcagaat	acgatttccc	180
aggtgatgat	attccagtaa	tccaagggtc	agcacttaaa	gctcttgaag	gtgatgaaaa	240
atatgaagac	atcatcatgg	aattgatgaa	tactgttgat	gaatatattc	cagaaccaga	300
acgtgatact	gacaaacctt	tgcttcttcc	agtcgaagat	gtattctcaa	tcactggacg	360
tggtagtctt	gcttcaggac	gtatcgaccg	tggtagtctt	aaagtcaacg	atgaagttga	420
aatcggtggt	atccgcgagg	aaatccaaaa	agcagttggt	actggtggtg	aaatgttccg	480
taaacaattg	gacgaaggtc	ttgctggaga	taacgtaggg	gttcttcttc	gtggtatcca	540
acgtgacgaa	attgaacgtg	gacaagttct	tgctaaacca	ggttcaattc	atccacacac	600
taaattcaaa	ggtgaagttt	acatccttac	taaagaagaa	ggtggacgtc	atactccatt	660
cttcaacaac	taccgtcctc	aattctactt	ccgtactaca	gacgttacag	gttcaatcga	720
acttcttgca	ggtactgaaa	tggtaatgcc	tggtgataac	gtaacaattg	atggttgagtt	780
gatccaccca	attgccgta					799

<210> 222

<211> 825

<212> DNA

<213> *Streptococcus macacae* ATCC 35911

<400> 222

tgggtgctatt	cttgtagtag	cttcaactga	cgggtccaatg	cctcaaacgc	gtgaacatat	60
ccttcttttca	cgccaagtag	gtgttaaaaa	ccttattggt	ttcatgaata	aagttgactt	120
agttgatgat	gaagaattgc	ttgaattggg	tgaatgggaa	atccgtgatc	ttcttacaga	180
atatgatttc	ccaggcgatg	aaattccagt	tatccaaggt	tcagcactta	aagctcttga	240
aggtgatact	aagtacgaag	atattatcat	ggaattgttg	gatactgtag	atgattacat	300

```

cccagaacca caacgtgata ctgacaagcc attgcttctt ccagtcgaag atgttttctc 360
tattactgga cgtgggtactg ttgcttcagg acgtattgac cgtgggtactg ttaagggttaa 420
tgatgaagtt gaaatcggtg gtattcgtga cgatattcaa aaagcagttg ttactgggtg 480
tgaaatgttc cgtaaacagc ttgacgaagg tcttgctggg gataacgtcg gtgtccttct 540
tcgtgggtatc caacgtgatg aaattgaacg cgggtcaagtt cttgctaaac caggatcaat 600
tcattccacat actaaattca aagggtgaagt ttatattctt actaaagaag aagggtggacg 660
tcatactcca ttctttaaca actaccgtcc acagttctac ttccgtacaa ctgatgtaac 720
tggttcaatt gatttgccag cagggtactga aatgggtatg cctgggtgata atgtttacgat 780
tgatgttgaa ctgatccacc caatcgctgt tgaacaaggt acaac 825

```

<210> 223
 <211> 822
 <212> DNA
 <213> Streptococcus gordonii ATCC 33399

```

<400> 223
ctatccttgt agtagcttca actgacggac caatgccaca aactcgtgag cacatccttc 60
tttcacgtca ggttggtggt aaacacctta tcgtcttcat gaacaaagtt gacttggttg 120
acgacgaaga attgcttgaa ttgggtgaaa tggaaatccg tgacctattg tcagaatacg 180
acttcccagg tgacgatctt ccagttatcc aaggttcagc tcttaaagcc cttgaagggtg 240
acactaaata cgaagacatc gttatggaat tgatgaacac agttgatgag tacatcccag 300
aaccagaacg tgacactgac aaaccattgc ttcttcaggt cgaagacgta ttctcaatca 360
ctgggtcgtgg tacagttgct tcaggacgta tcgaccgtgg tatcgttaaa gtcaacgacg 420
aaatcgaaat cgttggtatc aaagaagaaa ctcaaaaagc agttgttact ggtgttgaaa 480
tgttccgtaa acaacttgac gaaggtcttg cggagataa tgtaggtgtc cttcttcgtg 540
gtgttcaacg tgatgaaatc gaacgtggac aagttattgc taaaccaggt tcaatcaacc 600
cacacactaa attcaaaggt gaagtttaca tccttactaa agaagaaggt ggacgtcaca 660
ctccattctt caacaactac cgtccacaat tctacttccg tactactgac gttacagggt 720
caatcgaact tccagcaggt actgaaatgg taatgcctgg tgataacgtg acaatcgacg 780
ttgagttgat ccacccaatc gccgtagaac aaggtactac at 822

```

<210> 224
 <211> 827
 <212> DNA
 <213> Streptococcus mutans ATCC 25175

```

<400> 224
ccctggtgct atcctttagt tagcttcaac tgatggacca atgccacaaa ctctggaaca 60
cattcttctt tcacgtcaag ttggtgttaa atacctcatt gtcttcatga ataaagttga 120
tttggttgac gatgaagaat tgcttgaatt ggttgaaatg gaaatccgtg atcttcttct 180
agaatatgat ttcccagggt atgatatcc agttattcaa ggttcagctc tttaaagctc 240
tgaaggcgtat actgctcaag aagatatcat catggaatta atgcatactg ttgatgacta 300
cattccagat ccagaacgtg atactgacaa gccgtctcct ctccagtcg aagatgtttt 360
ctcaatcact ggtcgtggta ctggtgttct aggacgtatt gatcgtggta ctgttaaagt 420
taacgatgaa gttgaaatcg ttggtatccg tgatgacatt caaaaagctg ttgttactgg 480
tgttgaaatg ttccgtaaac aattggatga aggtattgca ggggataatg ttggtgttct 540
ccttcgtggt atccaacgtg atgaaatcga acgtgggtcaa gttcttgcta aaccagggtc 600
aattcaccca cactactaat tcaaagggtga agtttatatc ctactaaag aggaagggtg 660
acgtcatata ccattcttca ataactatcg tccacaattc tacttccgta caactgacgt 720
aactggttca attgagttgc cagcaggtac tgaaatgggt atgcctggtg ataacgttac 780
tattgacgtt gaattgatcc atccaatcgc tgttgaacaa ggtacta 827

```

<210> 225
 <211> 824
 <212> DNA
 <213> Streptococcus parasanguinis ATCC 15912

```

<400> 225
agctatcctt gtagtagctt caactgacgg accaatgcc acaacacgtg aacacatcct 60
tctttcacgt caggttggtg ttaaacactt gatcgtcttc atgaacaaag ttgacttggt 120
tgatgatgaa gaattgcttg aattggttga aatggaaatc cgtgaccttc ttccagaata 180
cgatttccca ggtgatgacc ttccagttat ccaaggttca gctcttaaag ctcttgaagg 240
tgactctaaa tatgaagata tcatcatgga attgatggat actgttgatg agtacatccc 300

```

agaaccagaa	cgcgatactg	acaaaccatt	gcttcttcca	gtcgaagacg	tattctcaat	360
cactggacgt	ggtacagttg	cttcaggacg	tatcgaccgt	ggtggtgttc	gtgtcaatga	420
tgaaatcgaa	atcggttgga	tcaaagaaga	aatccaaaaa	gcagttgtta	ctggtgttga	480
aatgttccgt	aaacaacttg	acgaaggtct	tgcaggggat	aacgttggtg	tgcttcttcg	540
tggtatccaa	cgtgatgaaa	tccaacgtgg	acaagttatc	gctaaaccag	gttcaatcaa	600
cccacacact	aaattcaaag	gtgaagttta	catccttact	aaagaagaag	gtggacgtca	660
tactccattc	ttcaacaact	accgtccaca	gttctacttc	cgtacaactg	acgtaactgg	720
atctatcgaa	cttccaccag	gaactgaaat	ggtaatgcct	ggtgataaac	tgactatcga	780
cggtgagttg	atccacccaa	tcgccgttga	acaaggtact	acat		824

<210> 226

<211> 824

<212> DNA

<213> *Streptococcus ratti* ATCC 19645

<400> 226

tggtgctatc	ctttagtag	cttcaactga	tggaccaatg	ccgcaaactc	gtgaacacat	60
cttgctttca	cgtcaagttg	gtgttaaata	ccttatcgtc	ttcatgaaca	aggttgactt	120
ggttgatgat	gaagaattgc	ttgaattggt	tgaaatggaa	atccgtgatc	ttctttcaga	180
atacgatttc	ccaggtgatg	acattccagt	tatccaaggt	tcagccctta	aagctcttga	240
aggtagacac	gaacaagaag	atgttatcat	ggaattgatg	aaaacagttg	atgagtacat	300
cccagatcca	gaacgcgata	ctgataagcc	attgcttctt	ccagtcgaag	acgtgttctc	360
aatcactgga	cgtggtactg	ttgcatcagg	acgtatcgac	cgtggtactg	ttaaagtcaa	420
tgacgaagtt	gaaatcgttg	gtatccgtga	tgacatccaa	aaagctggtg	ttactggtgt	480
tgaaatgttc	cgtaaacagc	ttgacgaagg	tcttgctggt	gataacgttg	gtgtacttct	540
tcgtggatc	caacgtgatg	aaatcgaaac	cgttcaagtt	cttgctaaac	caggttcaat	600
tcacccgcat	actaaattta	aaggtgaagt	ttacatcctt	actaaagaag	aaggcggacg	660
tcacactcca	ttcttcaaca	actaccgtcc	acagttctac	ttccgtacaa	ctgacgtaac	720
tggttcaatc	gaattgccag	caggtactga	aatgggttatg	cctgggtgata	acgtgactat	780
cgacgttgaa	ttgatccacc	caatcgctgt	tgaacaaggt	acta		824

<210> 227

<211> 795

<212> DNA

<213> *Streptococcus sanguinis* ATCC 10556

<400> 227

tgtagtagct	tcaactgacg	gaccaatgcc	acaaactcgt	gagcacatct	tgctttcacg	60
tcaggttggt	gttaaacact	tgatcgctct	catgaacaaa	gttgacttgg	ttgacgatga	120
agaattgctt	gaattgggtg	aaatggaaat	ccgtgacctc	ttgtcagaat	acgacttccc	180
aggtagacat	cttcagttta	tccaaggttc	agctcttaaa	gctcttgaag	gtgactctaa	240
atatgaagac	atcatcatgg	aattgatgga	cactgttgat	gagtacatcc	cagaaccaga	300
acgcgatact	gacaagccat	tgcttcttcc	agtcgaagac	gtattctcaa	tcactggtcg	360
tggtacagtt	gtcttcaggac	gtatcgaccg	tggtatcggt	aaagtcaaac	acgaaatcga	420
aatcggttgg	atcaaagaag	aaatccaaaa	agcagttggt	actggtggtg	aaatgttccg	480
taaacagctt	gacgaaggtc	ttgcagggga	caacgtagggt	gtgcttctcc	gtggtatcca	540
acgtgatgaa	atcgaacgtg	gacaagttat	cgctaaacca	gggtcaatca	acccacacac	600
taaattcaag	ggtgaagttt	atatccttac	taaagaagaa	ggcggacgtc	acactccatt	660
cttcaacaac	taccgtccac	agttctactt	ccgtacaact	gacgttacag	gttcaatcga	720
acttccagca	ggtactgaaa	tggtaatgcc	tggtgataac	gtaacaatcg	acgttgagtt	780
gatccaccca	atcgc					795

<210> 228

<211> 795

<212> DNA

<213> *Streptococcus sobrinus* ATCC 33478

<400> 228

tgtagtagct	tctactgacg	gaccaatgcc	acaaactcgt	gaacacatct	tgctttcacg	60
ccaagttggt	gttaagaacc	tcatcgctct	catgaacaa	gttgacttgg	ttgatgatga	120
agaattgctt	gaattgggtg	aaatggaaat	ccgtgatctt	ctttcagaat	acgatttccc	180
aggtagacac	attcctgttg	ttcaaggttc	agctcttaag	gctcttgaag	gtgatacagc	240
tgccgaagac	aagattatgg	aattgatgga	catcggttat	gattacattc	cagaaccaa	300

acgcgatact	gataagccat	tgcttctccc	agtcgaagac	gtattctcaa	tactgggtcg	360
tggtactggt	gcttcaggac	gtattgaccg	tggtactggt	aaggttaacg	acgaagttga	420
aatcggttgg	atccgtgacg	atatccaaaa	agcagttggt	actggagttg	aaatgttccg	480
taagcaattg	gacgaagggtc	ttgctggaga	taacgttgggt	gtgcttcttc	gtggatatcca	540
acgtgatgaa	attgaacgtg	gtcaagtatt	ggctgcacct	ggttcaatcc	acccacacac	600
taagttcaag	ggtgaagttt	acatcctttc	taaagatgaa	ggtggacgtc	acactccatt	660
cttcaacaac	taccgtccac	agttctactt	ccgtacaact	gacgtaactg	gttcaatcga	720
attgccagca	ggtactgaaa	tggttatgcc	tggtgataac	gttactatcg	acgttgaatt	780
gatccacca	atcgc					795

<210> 229

<211> 797

<212> DNA

<213> Streptococcus suis ATCC 43765

<400> 229

tgtagtagct	tcaactgacg	gtccaatgcc	acaaactcgt	gagcacatcc	ttctttcacg	60
tcagggttgg	gttaaaccac	ttatcgtctt	catgaacaaa	gttgacttgg	ttgacgatga	120
agaattgctt	gagttgggtg	aaatggaaat	ccgtgacctt	ctttcagaat	acgatttccc	180
aggtgatgat	cttccagtta	tccaagggtt	agctcttaaa	gctcttgaag	gtgactctaa	240
gtacgaagac	atcggttatg	aattgatgaa	cactggtgat	gagtacattc	cagaaccaga	300
acgcgacact	gacaaaccat	tggtgcttcc	agtcgaggac	gtattctcaa	tactgggtcg	360
tggtactgta	gcttcaggac	gtatcgaccg	tggtactggt	cgtgtcaacg	acgaaatcga	420
aatcggttgg	cttcaagaag	aaaaatctaa	agcagttggt	actgggtgtg	aaatgttccg	480
taaacaactt	gacgaagggtc	ttgccggcga	taacgttgggt	gtgcttcttc	gtggtgtaca	540
acgtgatgaa	atcgaacgtg	gtcaagttat	ctctaaacca	ggttctatca	acccacacac	600
taaattcaaa	ggtgaagttt	acatccttac	taaagaagaa	ggtggacgtc	acactccatt	660
cttcgacaac	taccgtccac	agttctactt	ccgtacaact	gacgtaactg	gttcaatcaa	720
attgccagaa	ggtactgaaa	tggtaatgcc	tggtgataac	gttactatcg	acgttgaatt	780
gatccacca	atcgccg					797

<210> 230

<211> 793

<212> DNA

<213> Streptococcus uberis ATCC 19436

<400> 230

ttggttgtgc	atcaactgat	ggaccaatgc	cacaaactcg	tgagcacatc	cttctttcac	60
gccaaagtgg	tggttaaacc	cttatcggtt	tcatgaacaa	aatcgacctt	gttgacgatg	120
aagaattgct	tgaattagtt	gaaatggaaa	tccgtgacct	tctttcagaa	tacgatttcc	180
caggtgatga	cctaccagtt	atccaagggt	cagctcttaa	agctcttgaa	ggtgattcta	240
aatacgaaga	catcatcatg	gaattgatga	aaactggtga	tgagtatat	ccagaaccag	300
aacgtgatgc	agacaaacca	ttacttcttc	cagtcgaaga	cgtattctca	atcacagggtc	360
gtggtactgt	agcttcagga	cgtatcgatc	gtggtactgt	tcgtgtcaac	gacgaaattg	420
aaatcggttg	tatcaaagaa	gaaactaaaa	aagcagttgt	tactggtgtt	gaaatgttcc	480
gtaaacaact	tgacgaagggt	cttgcaggag	ataacgtagg	tatccttctt	cgtggtgttc	540
aacgtgacga	aatcgaacgt	ggacaagtta	ttgctaaacc	agggtcaatc	aaccacacac	600
ctaaattcaa	aggtgaagtt	tacatccttt	ctaaagatga	agggtggacgt	catactccat	660
tcttcaacaa	ctaccgtcct	caattctatt	tccgtacaac	tgacgtaaca	gggttcaatcg	720
aacttccagc	tggtactgaa	atggtaatgc	ctggtgataa	cgtgacaatc	agcgttgagt	780
tgatccacc	aat					793

<210> 231

<211> 798

<212> DNA

<213> Streptococcus vestibularis ATCC 49124

<400> 231

ttgtagtagc	atctactgac	ggaccaatgc	cacaaactcg	tgagcacatc	cttctttcac	60
gtcagggttg	tggttaaacc	cttatcgctt	tcatgaacaa	agttgacttg	gttgacgatg	120
aagaattgct	tgaattgggt	gaaatggaaa	tccgtgacct	tctttcagaa	tacgatttcc	180
caggtgatga	tattccagtt	atccaagggt	cagctcttaa	agctcttgaa	ggtgattcta	240
aatacgaaga	catcatcatg	gacttgatga	acactggtga	cgaatacatt	ccagaaccag	300

aacgtgacac	tgacaaacca	ttgttgcttc	cagtcgaaga	cgtattctca	atcactgggc	360
gtgggtactgt	tgcttcagga	cgtatcgacc	gtgggtgtgt	tcgtgttaat	gacgaagttg	420
aaatcggttg	tcttaaagaa	gaaatccaaa	aagcagttgt	tactgggtga	gaaatgttcc	480
gtaaacaact	tgacgaaggt	attgccggag	ataacgtcgg	tgctctctct	cgtgggtatcc	540
aacgtgatga	aattgaacgt	gggtcaagtat	tggtctgcacc	tggttcaatc	aaccacacaca	600
ctaaattcaa	aggtgaagtt	tacatccttt	ctaaagaaga	aggtgggacgt	cacactccat	660
tcttcaacaa	ctaccgtcca	cagttctact	tccgtacaac	tgacgtaaca	ggttcaatcg	720
aacttcctgc	aggtactgaa	atgggttatgc	ctgggtgataa	cgtgactatc	gacgttgagt	780
tgatccaccc	aatcgccg					798

<210> 232
 <211> 829
 <212> DNA
 <213> *Tatumella ptyseos* ATCC 33301

<400> 232						
ggcgctatcc	tggttggtgc	tgcaactgac	ggccctatgc	ctcagacccg	tgagcacatc	60
ctgctgggccc	gccaggtagg	cgttccttac	atcatcgtgt	tcctgaacaa	atgtgacatg	120
ggtgatgatg	aagagctgct	ggaactggta	gaaatggaag	tccgtgacct	gctgtcacag	180
tacgacttcc	cgggtgacga	cacgccaatc	gttcgcgggt	cagcgctgaa	agcactggaa	240
ggtgaaggcg	agtgggaaga	gaagattctg	gagctggctg	gcttcttgga	ttcttacatc	300
cctgagccag	agcgtgctat	cgatcagccg	ttctgctgc	caatcgaaga	cgtattctca	360
atctccggtc	gtggtacagt	tgttaccggt	cgtgtagagc	gcgggatcat	caaagtcggt	420
gaagaagttg	agatcggttg	tatcaaagat	actgcgaaat	caacctgtac	cgggtgtgaa	480
atgttccgta	aactgctgga	ccagggtcag	gcgggtgaga	acgttggtgt	tctgctgcgt	540
ggtatcaagc	gtgaagagat	cgaacgtggt	caggttctgg	ctaaaccagg	ttcaatcaaa	600
ccacacaccc	agttcgagtc	agaagtttat	attctgtcta	aagacgaagg	cggccgctcat	660
actccgttct	tcaaaggcta	ccgtccacag	ttctacttcc	gtacaactga	cgtgaccgga	720
accatcgaac	tgccggaagg	cgtagagatg	gtaatgcctg	gtgacaacat	caaaatggtt	780
gttaccctga	tccatccaat	cgcgatggac	gatggctctgc	gtttcgcaa		829

<210> 233
 <211> 829
 <212> DNA
 <213> *Trabulsiella guamensis* ATCC 49490

<400> 233						
ggcgcaatcc	tggttagtagc	agcgactgac	ggcccgatgc	cgcagactcg	tgagcacatc	60
ctgctgggctc	gtcaggtagg	cgttccgtac	atcatcgtgt	tcctgaacaa	atgacgacatg	120
ggtgatgacg	aagagctgct	ggaactggta	gagatggaag	ttcgtgaact	gctgtctcag	180
tacgatttcc	cgggcgatga	cacgccgatc	gtacgtgggt	ctgctctgaa	agcgtggaa	240
ggcgacgcag	agtgggaagc	gaaaatcatc	gaactggcag	gtttctctgga	ttcttacatt	300
ccggaaccag	agcgtgcgat	tgacaagccg	ttctgctgc	cgatcgaaga	cgtattctcc	360
atctctggctc	gtggtaccgt	tgttaccggt	cgtgtagagc	gcggtatcat	caaagtgggt	420
gaagaagtag	aaatcggttg	tatcaaagag	actgcgaagt	caacctgtac	tggcgtagaa	480
atgttccgca	aactgctgga	cgaaggccgt	gctgggtgaga	acgtaggtgt	tctgctgcgt	540
ggtatcaaac	gtgaagaaat	cgaacgtggt	caggtactgg	ctaagccggg	caccatcaac	600
ccgcacacca	agttcgaatc	tgaagtgtac	attctgtcca	aagacgaagg	cggccgtcac	660
actccgttct	tcaaaggcta	ccgtccgcag	ttctacttcc	gtacaactga	cgtgactggc	720
accatcgaac	tgccggaagg	cgtagagatg	gtaatgcggg	gcgacaacat	caaaatggtt	780
gttaccctga	tccacccgat	cgcgatggac	gacggtctgc	gtttcgcaa		829

<210> 234
 <211> 825
 <212> DNA
 <213> *Veillonella parvula* ATCC 10790

<400> 234						
cggcgctatc	ttggttggtat	ccgcagctga	cggccctatg	cctcaaactc	gcgaacacat	60
cttggttggtc	cgccaagttg	gtgttctctgc	aatcgtagta	ttcttgaaca	aagctgacat	120
ggttgacgat	tgagaattga	tcgaattggg	agaaatggaa	gttcgtgaac	ttcttctctc	180
ctacgaattc	cctggcgacg	aagtacctat	cgttgtaggt	tccgcgttga	aagcttttga	240
aggcgatgct	caatatgtag	ctaaaattga	cgaattgatg	gacgctgtag	actcctacat	300

cccaacacca	gttcgtgaca	ctgataaacc	attcttggatg	cctgtggaag	atgttttcac	360
aatcactggg	cgtgggtacag	tagcaactgg	ccgtgttgaa	cgtgggtcaag	taaacggttg	420
tgatactgtt	gaagtagtag	gcttgaaaga	aaaagctgaa	caatacgtag	taacaggtct	480
tgaaatgttc	cgtaaagtgt	tggattctgc	agtagcaggt	gacaacgtag	gtgcattgct	540
tcgtgggtgt	gatcgtaaag	acatygaacg	tgggtcaagta	ttggctaaac	caggttccat	600
caacccacay	acaaaattca	aagcagaagt	atacgtattg	actaaagaag	aaggtgggtcg	660
tcatactcca	ttcttctcca	actaccgtcc	acaattctac	ttccgtacaa	cagacgtaac	720
aggtgttgta	aaccttctcg	aaggtgtaga	aatgtgtatg	cctggcgata	acgtaacaat	780
ggaaatcgaa	ttgattactc	caatcgctat	cgaagaaggt	cttcg		825

<210> 235

<211> 825

<212> DNA

<213> *Yersinia enterocolitica* ATCC 9610

<400> 235

cgctatcctg	gttgttgcgtg	caactgatgg	cccaatgcca	cagactcgtg	agcacatcct	60
gttgggtcgt	caggttggtg	ttccttacat	catcgatttc	atgaacaaat	gtgacatggg	120
tgacgatgaa	gagctgctag	aactggtaga	aatggaagt	cgcgatcttc	tgtctaccta	180
cgatttccca	ggcgaatgata	cgccagttgt	tcgtggttcc	gcgctgaaag	cattggaagg	240
cgaacctgag	tgggaagcaa	aaattatcga	actggctggc	tacctggatt	cttacatccc	300
agaaccagag	cgtgctatcg	ataagccgtt	cctgctgcca	atcgaagacg	tattctctat	360
ctctggtcgt	ggtactgttg	taacgggtcg	tgtagagcgc	ggtatcgtta	aagttgggtga	420
agaagtcgaa	attgttggcc	tgaaagatac	cgtaaatact	acttgtagctg	gcgttgaaat	480
gttccgcaaa	ctgctgggatg	aaggccgtgc	aggtgagaac	gttgggtgttc	tgctgcgtgg	540
tatcaagcgt	aaagatcggt	aacgtgggtca	agttcttgct	aaaccagggt	cgattaaacc	600
acacaccaaa	tttgaatcag	aagtttatat	tctgagcaaa	gatgaagggtg	gtcgccatac	660
tccgttcttc	aaaggctacc	gtcctcagtt	ctacttccgt	acaactgatg	taaccgggtac	720
tattgaactg	ccagaaggcg	ttgagatggg	gatgccaggt	gataacattc	aatgattgtg	780
taacctgatt	gctcctatcg	caatggatga	cggcttgccg	tttgc		825

<210> 236

<211> 828

<212> DNA

<213> *Yersinia frederiksenii* ATCC 33641

<400> 236

ggcgcgatcc	tggttgttgc	tgccactgat	ggcccgatgc	cacagactcg	cgagcacatt	60
ctgttagggc	gtcaggtggg	tgttccttac	atcctgggtc	tcctgaacaa	atgtgacatg	120
gttgacgacg	aagagctgct	ggaactggta	gaaatggaag	ttcgtgaact	tctgtctcag	180
tacgatttcc	ctggcgacga	cactccagtt	atccgtgggt	ctgcgctgaa	agcgtgggaa	240
ggcgaagctg	agtgggaagc	aaaaatcatc	gaattggctg	aggcgttgga	tagctatatt	300
ccacagccag	agcgtgcgat	tgataaacca	ttcctgctgc	caatcgaaga	cgtattctca	360
atctctggcc	gtggtactgt	tgtaaccggt	cgtgtagagc	gcggtatcgt	taaagtcggc	420
gaagaagtgc	aaatcggttg	tatcattgat	accatcaaga	ctacctgtac	tggtgttgaa	480
atgttccgca	aattgctgga	cgaaggccgt	gcgggtgaga	acgttgggtg	tctgctacgt	540
ggtactaaac	gtgatgacgt	acaacgtggg	caggtattgg	caaaaccagg	ttctatcaag	600
ccacacacca	aatttgaatc	agaagtttat	attctgagca	aagatgaagg	tggtcgccat	660
actccgttct	tcaaagggtta	tcgtcctcag	ttctacttcc	gtacaactga	cgtgaccggt	720
actatcgaac	tgccagaagg	cggttgagatg	gtgatgccag	gtgataacat	tcaaatgatt	780
gttaacctga	ttgctcctat	cgcaatggat	gacggtctgc	gctttgcg		828

<210> 237

<211> 813

<212> DNA

<213> *Yersinia intermedia* ATCC 29909

<400> 237

cttggttgct	gctgcaactg	atgggtcctat	gccacagact	cgcgagcaca	tcctgctagg	60
tcgtcaggtg	ggtgttcctt	acatcctggg	cttcctgaac	aagtgtgaca	tggttgacga	120
tgaggatgtg	ctggaattgg	tagaaatgga	agtcgcgcaa	cttctgtctc	aatatgattt	180
ccctggcgat	gatactcctg	ttatccgtgg	ttcagcgtcg	aaggcgttgg	aaggcagacc	240
tgaatgggaa	gcaaaaatta	tcgaattagc	tgaggcgtcg	gatagttata	ttccacagcc	300

agagcgcgcg	attgatagac	cattcttgct	gccaatcgaa	gacgtattct	ctatctcagg	360
tcgtgtgtaca	gtcgtcactg	gtcgtgtaga	gcgtgggatc	gttaaagttg	gcgaagaagt	420
tgaaatcggt	ggtattatcg	attccattag	aacaacatgt	actggcggtg	aaatgttccg	480
caaattgctg	gacgaaggcc	gcgcgggtga	gaacgttggt	gttctactgc	gtgggactaa	540
acgtgatgac	gtacagcgtg	gtcagggtatt	agctaagcca	ggttctatca	agccacatac	600
taaattcgaa	tccgaagttt	atattctgag	caaagatgaa	ggcgggcgtc	acacgccgtt	660
cttcaaaggc	taccgtcctc	agttctactt	ccgtacaacg	gatgtaaccg	gtactattga	720
attgccagac	ggcggttgaga	tgggtgatgcc	aggtgataac	attcaaataga	ttgttaacct	780
gattgcacct	attgcgatgg	atgatggtct	gcg			813

<210> 238

<211> 829

<212> DNA

<213> *Yersinia pestis* strain KIM D27

<400> 238

ggagcgatct	tggttgttgc	tgcaaccgat	ggccctatgc	cgcagactcg	tgagcatatc	60
ctgctggggc	gccagggttg	tgtcccatac	attattgtct	tcctgaacaa	atgtgacatg	120
ggtgacgatg	aagagttgct	agagttgggt	gaaatggagg	ttcgtgagct	tctgtctcaa	180
tacgatttcc	caggcgacga	cactccagtc	atccgtgggt	cagcgttgaa	agccctggaa	240
ggtgacgctg	agtgggaagc	taaaattatc	gagttggcag	aagctctgga	tagctatatt	300
ccgcaaccag	aacgcgctat	tgatagacca	ttcctattgc	caattgaaga	cgtattctct	360
atttctggtc	gtggtactgt	agttactggg	cgtgtagaac	gtggtattgt	taaggctcggc	420
gaagaagttg	aaatcgttgg	tattatcgat	acgattaaaa	caacttgtag	tggcgttgaa	480
atgttccgca	agctgctgga	tgaaggccgt	gctggtgaaa	atgttgggtg	tctgctgcgt	540
ggtactaagc	gtgacgatgt	tcagcgtggg	caagtactgg	cgaaaccagg	ttctatcaag	600
ccacacacga	agtttgagtc	agaagtttat	attctgagca	aagatgaagg	cggccgctcat	660
acaccgttct	tcaagggcta	ccgtcctcag	ttctacttcc	gtacaactga	cgtgaccggg	720
accattgagc	tgccagaagg	cggtgaaatg	gtcatgcctg	gtgacaacgt	aaacatgggt	780
gttaacctaa	ttgctcctat	cgcaatggat	gatgggtctgc	gcttcgcaa		829

<210> 239

<211> 817

<212> DNA

<213> *Yersinia pseudotuberculosis* ATCC 29833

<400> 239

tggagcgatc	ttggttgttg	ctgcaaccga	tggccctatg	cgcagactc	gtgagcatat	60
cctgctgggc	cgccagggtg	gtgtcccata	cattattgtc	ttcctgaaca	aatgtgacat	120
ggttgacgat	gaagagttgc	tagagttggg	tgaaatggag	gttcgtgagc	ttctgtctca	180
atacgatttc	ccaggcgacg	acactccagt	catccgtggg	tcagcgttga	aagccctgga	240
aggtgacgct	gagtggggaag	ctaaaattat	cgagttggca	gaagctctgg	atagctatat	300
tccgcaacca	gaacgcgcta	ttgatagacc	attcctattg	ccaattgaag	acgtattctc	360
tatttctggg	cgtggtagtc	tagttactgg	tcgtgtagaa	cgcggatttg	ttaaggctcg	420
cgaagaagtt	gaaatcgttg	gtattatcga	tacgattaaa	acaacttgta	ctggcgttga	480
aatgttccgc	aagctgctgg	atgaaggccg	tgctgggtgaa	aatgttggtg	ttctgctgcg	540
tggtactaag	cgtgacgatg	ttcagcgtgg	tcaagtactg	gcgaaaccag	gttctatcaa	600
gccacacacg	aagtttgagt	cagaagttta	tattctgagc	aaagatgaag	gcggccgtca	660
tacaccgttc	ttcaagggct	accgtcctca	gttctacttc	cgtacaactg	acgtgaccgg	720
taccattgag	ctgccagaag	gcgttgaaat	ggtcatgcct	ggtgacaacg	taaacatggg	780
tgtaacctaa	attgctccta	tcgcaatgga	tgatgggt			817

<210> 240

<211> 829

<212> DNA

<213> *Yersinia rohdei* ATCC 43380

<400> 240

tggcgcgatc	ctgggttgttg	ctgcaactga	tggcccaatg	ccacagactc	gcgagcacat	60
cctgttgggt	cgtcaagttg	gtgttcctta	catcttagtc	ttcctgaaca	agtgtgacat	120
ggttgacgac	gaagagttgc	tggaactggg	tgaactggaa	gttcgtgagc	ttctgtctca	180
atacgatttc	cctggcgatg	acactccggg	tattcgtggg	tccgcgctga	aagcgtgga	240
aggcgaggcc	gagtggggaag	ccaaaattat	tgaacttgct	gaagcactgg	atagctacat	300

tccacagcca	gagcgcgcga	ttgataaacc	attcttgctg	ccaatcgaag	acgtattctc	360
tatctcaggc	cgtggaacag	ttgttaccgg	gcgtgttgag	cgcggtatcg	tcagagtggg	420
cgaagaagtt	gaaatcgtgg	gtatcatcga	caccattaaa	accacttgta	ccggtgttga	480
aatgttccgc	aaactgctgg	acgaaggccg	tgccggtgag	aacgttggtg	ttctgctgcg	540
cgg tactaaa	cgcgatgacg	tgcaacgtgg	tcaagtgttg	gctaaaccag	gttctattaa	600
gccgcatacc	aaatttgagt	cagaagttta	tattctgagc	aaagatgaag	gtggctcgtca	660
tactccgttc	ttcaaagggt	accgtccaca	gttctacttc	cgtacaactg	acgtgaccgg	720
taccatcgaa	ctgccagacg	gtgttgagat	ggatgatgcca	ggtgataaca	ttcaaataat	780
tgtaaacctg	attgcgcccta	ttgcaatgga	tgacgggtcta	cgatttgca		829

<210> 241

<211> 804

<212> DNA

<213> *Yokenella regensburgei* ATCC 35313

<400> 241

tgccgcgac	ctgggtgttg	ctgcgactga	cggcccgatg	cgcgagactc	gtgagcacat	60
cctgctgggt	cgtcaggtag	gcgttccgta	catcatcgtg	ttcctgaaca	aatgcgacat	120
gggtgatgac	gaagagctgc	tggaactggt	agaaatggaa	gttcgtgaac	ttctgtctca	180
gtacgatttc	ccgggagcag	acactccgat	catccgtggt	tctgctctga	aagcgttgga	240
aggcgaagca	gagtgggaag	ctaaaatcgt	tgagctggct	ggcttccctg	attcttacat	300
cccagaacca	gttcgtgcta	tcgacctgcc	gttctctgctg	cgcgatcgaag	acgtattctc	360
catctccggt	cgtggcaccg	ttgttaccgg	tcgtgtagag	cgcggtatcg	ttaaagttgg	420
cgaagaagtt	gaaatcggtt	gtatcaaaga	gactgctaag	tctacctgta	ccggcgttga	480
aatgttccgc	aaactgctgg	acgaaggccg	tgctgggtgag	aacgttggtg	ttctgctgcg	540
tggtatcaaa	cgtgaagaaa	tcgaacgtgg	tcaggtaactg	gctaagccgg	gttccatcaa	600
gccgcacacc	aaattcgaat	ctgaagttaa	tatcctgtcc	aaagacgaag	gcggccgtca	660
tactccgttc	ttcaaaggct	accgtccgca	gttctacttc	cgtacaactg	acgtgactgg	720
taccatcgaa	ctgccggaag	gcgtagagat	ggtaatgccg	ggcgacaaca	tcaaaatggt	780
tggtaccctg	atccaccaga	tcgc				804

<210> 242

<211> 849

<212> DNA

<213> *Achromobacter xylosoxidans* subsp. *denitrificans* ATCC 15173

<400> 242

tcagttcccc	cgcgatcaca	tgcccaagat	ctacgaagcg	cttactctgg	ccgacgaggg	60
ttcctcgttc	gccgaaaagg	gtctgacgct	ggaagtgcag	caacagctgg	gcgacggcgt	120
gggtgcgtacc	atcgcgctgg	gctccagcga	cggcctgcgc	cgcggtatga	aggtcaccgg	180
tacgggcgcg	ccgatctcgg	tgccggctcg	caccggcacg	ctggggccgca	tcattggacgt	240
gctgggtcgt	cccatacgacg	aagccggccc	gatccagcac	gaagaaaagc	gtggcattca	300
ccagccggct	ccccgtttcg	acgaactgtc	gccgtcggtg	gaactgctgg	aaaccggcat	360
caaggttatt	gacctggtct	gcccgttcgc	caaggcgccg	aaggctcgcc	tggtcggcgg	420
cgccggcgtg	ggcaagaccg	tcaacatgat	ggaactgatc	aacaacatcg	ccaagcagca	480
cagcggtttg	tcggtgttcg	ccggcgtggg	cgagcgtacc	cgcgaaggca	acgacttcta	540
ccacgaaatg	gaagagtcca	acgttctgga	caaggttgcg	atggtgttcg	gtcagatgaa	600
cgaacccccg	ggcaaccgtc	tgccgctggc	gctgaccggc	ctgaccatgg	ccgagaagtt	660
ccgcgacgaa	ggccgcgaca	tcctgttctt	cgtggacaa	atctaccgct	acaccctggc	720
cggtagcgaa	gtgtccgcgc	tgctggggcg	tatgccgtcg	gcagtgggct	accagcccac	780
gctggccgaa	gaaatgggca	agctgcaaga	gcgcatac	tcgaccaaga	ccggctcgat	840
cacctcgat						849

<210> 243

<211> 787

<212> DNA

<213> *Acinetobacter baumannii* ATCC 19606

<400> 243

tgaaactact	ttagaagttc	agcaacaact	tggtgatggg	gttggttcgta	ccatcgcaat	60
gggttctaca	gaaggtctta	aacgtgggtc	tactgttaact	agcacaacag	caccgatctc	120
tggtccagtt	ggtagaccca	ctcttgggcg	tatcatggac	gttttaggtc	gtcctatcga	180
tgaagcaggt	cctgttgcca	ctgaagaacg	tttgccgatt	caccgtcaag	cgcttcttta	240

tgctgaacaa	gcagcttcta	ctgacctttt	agaaactggt	attaaagtca	tcgacttact	300
ttgcccgttt	gcgaaagggt	gtaaagttgg	tttattcggg	ggtgctgggt	ttggtaaaac	360
cgtaaacatg	atggaattga	tcaacaacat	cgcgaaagca	cactcagggt	tatctgtgtt	420
tgctgggtgt	ggtgagcgta	ctcgtgaagg	taatgacttc	tatcacgaaa	tgaaagattc	480
taacgttctt	gacaaagtag	caatgggtcta	cggtcagatg	aacgagccac	caggtaaccg	540
tttacgcgta	gcgttaactg	gtttgactat	ggctgaatac	ttccgtgatg	aaaaagacga	600
aaacggtaaa	ggtcgtgacg	tattattatt	cgtcgacaac	atctaccgtt	atacacttgc	660
aggtagtgaa	gtatcagcat	tgtaggtcgc	tatgccatct	gcggtagggt	accaacctac	720
acttgacgaa	gaaatgggtg	ttcttcaaga	gcgtattaca	tctactaaat	ctgggttcgat	780
cacttcg						787

<210> 244

<211> 825

<212> DNA

<213> *Acinetobacter lwoffii* strain CDCF 3697

<400> 244

gttcctaaga	tctatgacgc	tctccacggt	gatggcactg	aaactacatt	agaagttcag	60
caacaacttg	gtgatggcgt	agttcgtact	attgcaatgg	gttctactga	aggccttaag	120
cgtgggtttga	acgtaactaa	cactaacgcg	cggattttctg	taccagtagg	tacagcgact	180
ctaggtcgta	tcatggacgt	tcttggtcgc	ccaatcgacg	aagctgggtcc	agttgcgact	240
gaagcgcggt	tgccgattca	cgtcaagca	ccttcttatg	ctgaacaagc	agcttctact	300
gaccttttag	aaactgggtat	taaagtcac	gacttacttt	gcccgttcgc	taaaggtggt	360
aaagttgggt	tggtcgggtg	tgccggtggt	ggtaaaaactg	taaacatgat	ggagttgatc	420
aacaacatcg	ctaaagcgca	ctcaggttta	tctgtattcg	ctgggtgttg	tgagcgtagt	480
cgtgaaggta	atgacttcta	tcacgagatg	aaagactcaa	acgttctaga	caaagtagca	540
atgggtctacg	gtcagatgaa	cgagccaccg	ggtaaccggt	tacgcgtagc	gttgactggg	600
ttgaccatgg	ctgagtactt	cgtgacgag	aaagacgaaa	acggcaaaag	ccgtgacgta	660
ctattgttcg	tagataacat	ctaccgttat	acactagcag	gtactgaagt	atcagcactt	720
ctaggtcgta	tgccgtctgc	agtaggttac	caaccgacac	ttgcagaaga	gatgggtggt	780
cttcaagaac	gtattacatc	gactaagttc	ggttcagatta	cgtca		825

<210> 245

<211> 837

<212> DNA

<213> *Staphylococcus saprophyticus* strain CSG 197

<400> 245

caatgaagtt	ccagaaatta	acaatgcctt	agtcgtagac	gttgaaagag	atgaaggtac	60
agtatctctt	acattagaag	tggcattaca	acttggcgat	gatgtcgtac	gtacaattgc	120
aatggattct	actgatgggtg	ttaaactgtg	tacagaagtt	cgagatagcg	gagatagcat	180
cagtgttcca	gttgggtgatg	ctacgttagg	acgtgtgttt	aatgttcttg	gtgatacaat	240
tgacttagac	gagaagcttg	atacttctgt	caaacgtgat	ccaattcata	gagaagcacc	300
tgcatctgat	caattatcaa	caaaagttga	aatcttagaa	acaggtatta	aagtaattga	360
tttacttgca	ccatatatta	aaggtggtaa	aatcggttta	ttcgggtggcg	ctgggtgtagg	420
taaaacagta	ttaattcaag	aattaattaa	taatatagct	caagaacatg	gtgggtatttc	480
agtatttgcc	ggcgtaggtg	aacgtacgcg	tgaaggtaat	gacttatact	acgaaatgag	540
tgatagtggg	gttattaaga	aaacagctat	ggctctcgga	caaatgaatg	agccacctgg	600
tgcgcgatg	cgtgttgctt	tatcaggctt	aacaatggct	gaacacttcc	gtgatgtaca	660
aggacaagat	gttttactat	ttattgataa	catattcaga	tttacgcaag	ctgggttcaga	720
agtatcagca	ctattaggtc	gtatgccatc	agccgttggt	tatcaacctc	cccttgctac	780
tgaaatgggt	caattacaag	aacgtattac	atcaacaact	aaaggatctg	taacgtc	837

<210> 246

<211> 851

<212> DNA

<213> *Alcaligenes faecalis* ATCC 15554

<400> 246

ttccccgcg	acagcatccc	taaagtctac	gaagcattga	cgctcggtga	cgaaagttcg	60
gcttttcgcg	aaaaaggcct	gacttttgaa	gtacagcaac	aattgggtga	cgggtgagtt	120
cgcaccatcg	ccatgggttc	cagcgacggc	ctgcgcgcg	gtatggaagt	ggccgggttcg	180
ggcgctccca	tctccgttcc	cgtgggtgtc	ggcaccctgg	gtcgcatatt	ggacgttctg	240

ggtcgcccta	ttgacgaagt	cggtcctatt	cagtcgcgac	agcgctcgcg	cattcaccag	300
cctgcgccta	ctttcgaaga	actgtcgcct	tccgtagagc	tgctggaaac	cggtattaaa	360
gtgattgacc	tggtttgccc	gttcgcgaag	ggtggtaagg	ttggtctgtt	cggtgggtgcc	420
ggtgtgggca	agaccgtgaa	catgctggag	ctgatcaaca	acatcgccaa	ggcacacagc	480
ggtctgtccg	tgtttgccgg	tgtgggtgag	cgtacccgtg	aaggtaacga	cttctaccac	540
gaaatggccg	atgctggcgt	tatccagatg	gacaacctga	gcgagtccaa	agtggccatg	600
gtgttcggtc	agatgaacga	acctccaggc	aaccgtctgc	gtgtggcact	gtccggcctg	660
accatggccg	agaagtcccg	tgacgaaggc	cgtgacatcc	tgttctttgt	ggacaacatc	720
taccgctaca	cgctggccgg	tacagaagtg	tccgctctgc	tgggtcgtat	gccttcgcga	780
gtgggttacc	agcctacgct	ggccgaggaa	atgggtaage	tgcaagagcg	cattacctcc	840
accaagaccg	g					851

<210> 247

<211> 846

<212> DNA

<213> *Bacillus anthracis* strain 4229

<400> 247

gatggcgga	agctaccaga	aatctacaac	gcccttacgg	taaaacagag	caacgaaaac	60
ggaacaagca	ttaacttaac	atttgaagtt	gcacttcatt	taggtgatga	cacagttcgt	120
acagttgcaa	tgtcttcac	agatggactt	gttcgtggca	cagaagtaga	agatactggt	180
aaagcaatct	ctgtaccagt	tggtgatgca	acacttggtc	gtgtatttaa	cgtattaggt	240
gatgcaattg	acttagatgg	tgaggttcct	gcggatgtac	gtcgtgatcc	aattcaccgt	300
caagcacctg	cattcgaaga	attatctact	aaagtagaaa	ttcttgaaac	tggtattaaa	360
gtagtagact	tacttgctcc	ttacattaag	ggtggtaaga	tccgtctatt	cggtgggtgcc	420
ggtgtaggta	aaacgggtatt	aattcaggaa	ttaatcaata	acatcgca	agaacacggt	480
ggtatctctg	tattcgctgg	tgtagggtgag	cgtactcgtg	agggtaatga	cttataccac	540
gaaatgagcg	attctggcgt	aattaagaaa	actgcgatgg	tattcggaca	aatgaacgag	600
ccacctggag	cacgtcaacg	tgttgcgtaa	acaggtttta	caatggctga	gcatttcctg	660
gatgagcaag	gacaagatgt	acttctgttc	atcgataata	tcttccggtt	cacgaagca	720
ggttctgaag	tatctgccc	tcttgccgt	atgccatctg	cggtaggtta	ccaaccaaca	780
cttgcaacag	aaatgggtca	attacaagag	cgtattacat	ctacaaataa	agggtctatc	840
acgtct						846

<210> 248

<211> 810

<212> DNA

<213> *Bacillus cereus* ATCC 14579

<400> 248

ccagaaatct	acaatgccct	tacggtaaaa	caaagcaacg	aaaacggaag	catgaactta	60
acatttgaag	ttgcacttca	tttaggtgat	gatacagttc	gtacagttgc	gatgtcttcc	120
acagatggac	ttgttcgtgg	cacagaagta	gaagatactg	gtaaagcaat	ctctgtacca	180
gttggtgatg	caacacttgg	acgtgtattc	aacgtattag	gtgatgcaat	tgacttagat	240
ggtgaacttc	ctgcggatgt	acaccgtgat	ccaattcacc	gtcaagcacc	tgcattcgaa	300
gaattatcta	ctaaagtaga	aattcttgaa	actgggtatta	aagtagtaga	cttacttgct	360
ccttacatta	agggtggtaa	gatcggccta	ttcgggtggg	cggcgtagg	taaaacagta	420
ttaattcagg	agttaatcaa	taacatcgca	caagagcacg	gtggtatctc	tgtattcgct	480
ggtgtagggt	agcgtactcg	tgagggtaat	gacttatacc	acgaaatgag	cgattctggc	540
gtaatcaaga	aaactgcgat	ggtattcggg	caaatgaacg	agccacctgg	agcacgtcaa	600
cgtgttgcat	taacagggtt	aacaatggct	gagcatttcc	gtgatgagca	aggacaagac	660
gtacttctgt	tcacogataa	catcttccgt	ttcacgcaag	cgggttctga	agtatctgcc	720
cttcttggtc	gtatgccatc	tgcggtagg	taccaaccaa	cacttgcaac	agaaatgggt	780
caattacaag	agcgtattac	atctacaaat				810

<210> 249

<211> 944

<212> DNA

<213> *Bacteroides distasonis* ATCC 8503

<400> 249

ctttgattat	gggacagaag	aaacagtaac	cctcccccg	atccacgacg	ccatggagat	60
ttccccccca	aacggaaaaga	tcttgatcgt	cgaagttcag	caacacatcg	gggaaaacac	120

cgccccgtacc	gtagcgatgg	atacgaccga	cggattgaga	cgaggcatgg	aggccgtgtc	180
atacgggaatg	cccataacca	tgccgaccgg	cgaccaagtc	aaaggacgtt	taatgaatgt	240
caccggcgac	cctatcgatg	gcatggccca	gcttactaaa	gacggggctc	ttcccatcca	300
tcgtgagcct	cctaaattcg	aggatctgac	aacgacccaa	gaggtcttgt	acacgggtat	360
taaagtaatc	gattttattgg	aaccttacgc	caaaggaggc	aagatcggac	ttttcggagg	420
agccggagtc	ggcaaaacgg	tattgatcat	ggaattgatc	aacaacatcg	caaagaaaaa	480
caacggattc	tccgtcttcg	ccggtgtggg	tgaacgtaca	cgtgaaggaa	atgacctatt	540
gcgtgaaatg	atccaatccg	gtgtcatccg	atacggcgag	gagtttaaga	agagtatgga	600
ggcaggcaac	tgggacttgt	cgaagatcga	ttacgatgaa	ttggctaagt	cgcaggctac	660
cttggtattc	gggcagatga	acgaaccgcc	ggcgccccgc	tcgtccgtgg	ccttatcccg	720
tttgacgatc	gccgaatcct	tccgtgacaa	agcctctgag	ggagaaagaa	aagatatatt	780
attcttcatc	gataatatct	tccgtttcac	ccaagccggt	tccgagggtt	ccgccttgct	840
ggggcgatg	ccttcgcgcg	taggttacca	accgacattg	gccacggaaa	tgggagctat	900
gcaagagcgt	atcacttcaa	ccaagaaggg	ctccatcacc	tccg		944

<210> 250

<211> 939

<212> DNA

<213> *Bacteroides ovatus* ATCC 8483

<400> 250

ttgagggtac	ggatgcagaa	ttggtgctgc	caagcatcca	cgacgcactg	gagataaaga	60
ggccaaacgg	caaaataactg	gttgtagaag	ttcagcaaca	tatcggcgaa	aatacgggtgc	120
gtaccgtagc	gatggacagt	actgacggac	ttcagagagg	catgaaagtg	tatcccaccg	180
gaggccccat	cacgatgccg	attggcgaac	agattaaagg	acgactgatg	aacgtagtcg	240
gtgattcgat	cgacggtatg	aaaggactcg	accgcaaagg	tgcatattcc	attcatcgcg	300
acccccctaa	gtttgaggat	ttgactactg	tgcaagagggt	gctcttcaca	ggtatcaaag	360
tgatcgacct	gctcgaaccg	tatgccaaaag	gtggtaaaat	cggtttggtc	ggcgggtgccg	420
gtgtaggaaa	gactgtattg	attcaggaac	ttatcaataa	tatcgccaag	aaacataatg	480
gattctctgt	atthtgcggga	gtaggtgaac	gtacccgtga	aggtaacgac	ttgctgcgcg	540
aaatgattga	atccggtgta	atccggttacg	gcgaagcatt	caaagaagga	atggagaaag	600
gtcactggga	tctttcgaaa	gtggattata	acgaactgga	gaaatcgcaa	gtgtctctga	660
ttttcgggtca	gatgaacgag	cctccggggcg	cacgtgcctc	tgtggcattg	tccggactga	720
cgggtggcgga	atctttccgc	gacgcaggaa	aagaagggtga	gaaacgcgat	attctgttct	780
ttattgataa	tatcttccgt	ttcacgcaag	caggttcaga	agtgtccgcc	cttttgggac	840
gtatgccttc	cgctgttggt	taccagccca	cgttggtctac	ggaaatgggt	gcgatgcagg	900
aacgtatcac	gtctaccgcg	aaaggttcta	tcacctccg			939

<210> 251

<211> 833

<212> DNA

<213> *Leclercia adecarboxylata* ATCC 23216

<400> 251

cgaattccct	caggatgccg	taccgcgcgt	gtacgatgct	cttgagggttc	agaatggtaa	60
tgagagcctg	gtgctggaag	ttcagcagca	gctcggcggc	ggtattgtgc	gtaccatcgc	120
catgggttct	tccgacggtc	tgcgtcgtgg	tctggaagtt	aaagacctcg	agcacccaat	180
cgaagtacca	gtaggtaaag	caaccctggg	ccgtatcatg	aacgtcctgg	gtcagccgat	240
cgacatgaaa	ggcgacatcg	gcgaagaaga	gcgttgggct	atccaccgtt	cagcaccttc	300
ctatgaagag	ctgtccagct	ctcaggaact	gctggaaacc	ggcatcaaag	ttatcgacct	360
gatgtgtccg	ttcgcgaagg	gcggtaaagt	tggtctgttc	ggcgggtgcg	gtgtaggtaa	420
aaccgtaaac	atgatggagc	tgatccgtaa	catcgcgatc	gagcactccg	gttactccgt	480
gtttgcaggc	gtgggtgagc	gtactcgtga	gggtaacgac	ttctaccacg	aaatgaccga	540
ctccaacgtt	ctggacaaaag	tatccctggg	ttacggccag	atgaacgagc	caccaggaaa	600
ccgtctgcgc	gttgcgctga	ccggcctgac	catggctgag	aagttccgtg	acgaaggctc	660
tgacgtactg	ctgttcgttg	acaacatcta	ccgttacacc	ctggccggta	cggaagtatc	720
cgcactgctg	ggtcgtatgc	catcagcagt	aggctaccag	ccgaccctgg	cggaagagat	780
gggtgttctg	caggaacgta	tcacctctac	caaaaccggt	tctatcacct	cgc	833

<210> 252

<211> 819

<212> DNA

<213> *Stenotrophomonas maltophilia* CDC F3338

<400> 252

gtgtacgacg	cactgaaggt	ggaaaacacc	gagatcaccc	tcgaagtcca	gcagcagctg	60
ggcgacggcg	tggtgcgtac	catcgccctc	ggttccaccg	acggcctgaa	gcgcaacctg	120
gttgccgtca	acaccggcgg	tggcatctcg	gtgccggctg	gcgccggcac	cctgggcccgc	180
atcatggacg	tgctggggccg	tccgatcgac	gaagccggcc	cggtcgctgc	cagcgacaac	240
tgggaaatcc	accgcgctgc	gccgtcgtat	gaagaccagt	ccccggccac	cgagctgctg	300
gaaaccggca	tcaaggtcat	cgacctgatg	tgcccgttcg	ccaagggcgg	caaggtcggc	360
ctgttcggcg	gcgcggcggt	cggcaagacc	gtcaacatga	tggaaactgat	caacaacatc	420
gccaaaggcgc	acagcggcct	gtccgtgttc	gccggcgctg	gtgagcgtac	ccgtgagggc	480
aacgacttct	accacgagat	gaaggactcc	aacgtcctgg	acaaggtggc	gatggtgtac	540
ggccagatga	acgagccggc	gggcaaccgt	ctgcgcgtcg	ccctgaccgg	cctgaccatg	600
gccgagtact	tccgcgtatg	gaaggacgaa	aacggcaagg	gcaaggacgt	cctgctgttc	660
gtcgacaaca	tctaccgcta	caccctggcc	ggtaccgaag	tgtcggcact	gctgggcccgc	720
atgccgtccg	cggtgggtta	ccagccgacc	ctggccgagg	aaatgggcgt	cctgcaggag	780
cgcatacact	cgaccaagaa	tggttcgatc	acctcgatc			819

<210> 253

<211> 864

<212> DNA

<213> Bartonella henselae ATCC 49882

<400> 253

agtttgaagg	ccctttgcca	aatattctca	atgcattaga	aacagataat	ttgggcaatc	60
ggctagtttt	agaagttgct	cagcatttgg	gtgaaaatac	cgtgcgtacc	attgccatgg	120
atactaccga	tggtcttgtc	cgtggtcaaa	aagtttttga	tacaggaaca	cagatcagtg	180
ttcccgtggg	agaagcaaca	cttggtcgta	ttatgaatgt	gattggagag	ccggttgata	240
atgttggccc	aattgctaca	agcaaaaccc	gttccattca	ccaagaggct	cctgaatatg	300
tggagcaatc	aaccgcatca	gaaatccttg	tgactggtat	taaagtcgtt	gatctgttag	360
ctccttattc	taaagggggg	aaggttggtt	tgtttgaggg	tgccggtgtt	ggtaaaaccg	420
ttctcattat	ggagcttatc	aacaatattg	caaaggcgca	tggtggctat	tcagtgtttg	480
ccggtgttgg	tgaacgtaca	cgtgagggaa	atgatcttta	ttatgaaatg	atcgaaagcc	540
gtgtgaatgt	gaatccaaaa	gacaacaatg	gttcaacaga	aggatcaaaa	tgtgcactcg	600
tttatgggca	aatgaatgaa	ccaccagggg	cgcggtgcacg	tgtgggtctt	tcaggattga	660
ccattgcaga	aagtttccgt	gatgagggac	aagatgtttt	gttcttcgta	gataaatatt	720
tccgtttttac	gcaagcaggc	gctgaagtgt	cagctctttt	agggcggtatt	ccttctgctg	780
tagggtatca	gccaaactttg	gcaactgata	tgggggcttt	gcaagagcgt	attaccagta	840
caagaacagg	ctctattacc	tctg				864

<210> 254

<211> 866

<212> DNA

<213> Bifidobacterium adolescentis ATCC 15703

<400> 254

ttcccgggtg	gccacctgcc	cgacattttac	aatgcactta	ccgttgaact	gkccaacacc	60
ggygtccacg	aasagggcga	gaccaccaag	aagatcaccc	ttgmgttga	acagcatctt	120
ggcgattcca	ccgtgcgtac	cgtcgctctg	aagccgactg	acggccttgt	gcgtggcgcc	180
accgtgtatg	acaccggcgg	cccgatctct	gtgccggttg	gcgatgtcac	caagggccac	240
gtattcgacg	tgtccggcaa	catactcaac	aagaaggccg	acgagaccgt	taaggttacc	300
gaacgttggg	ctatccaccg	taaccgcgcg	gcattcgacc	agctggagtc	caagaccag	360
atgttcgaaa	ccggtatcaa	ggtcatcgat	ttgctgaccc	cgtatgtgca	gggcccgaag	420
atcggctctg	tcggcggcgc	aggcgtcggc	aagaccgtgc	tgatccagga	aatgattcag	480
cgtgtggctc	agaaccacgg	cgggtgtgtc	gtgttcgcag	gcgtcggcga	gcgtaccctg	540
gagggtaacg	atctgatcgg	cgaaatggac	gaagccggcg	tgctcgagaa	gaccgcactg	600
gtcttcggcc	agatggatga	gcagccgggt	acccgtctgc	gcgtgccgct	gaccgcactg	660
accatggcag	agtacttccg	tgacgtacag	aatcaggacg	tgctgctgtt	catcgataac	720
atcttccggt	tcaccacagg	tggttccgag	gtgtccaccc	tgctcggccg	tatgcctgct	780
gcagtgggct	accagccgaa	cctggccgat	gagatgggag	cgctgcagga	gcgaatcact	840
tcgaccgctg	gacactccat	cacctc				866

<210> 255

<211> 842

<212> DNA

<213> *Brucella abortus* strain S2308

<400> 255

aaggccagct	gccgctgata	ctgaacgcgc	ttgaagtggg	caatcagggc	catcgtcttg	60
ttctcgaagt	tgcccagcac	ctcggcgaag	acaccgtgcg	caccatcgcc	atggacgcga	120
ccgaaggtct	cgttcgcggg	caggaagcac	gcgacactgg	cgaaccgatc	atgggtgccg	180
tcggcgctga	aacgcttggc	cgcatacatg	acgtcatcgg	cgagccgggt	gacgaagcag	240
gccccatcaa	gaccaaggca	acccgcgcga	tccaccagaa	cgcgcgcgaa	tatatcgaac	300
agtcgaccga	agccgaaatt	ctggtcacgg	gcatacaagg	cgtcgacctt	ctggcgccct	360
acgccaaggg	cggcaagatc	ggcctcttcg	gcgggtgcagg	cgtcggcaag	accgttctca	420
tcattggaact	catcaacaac	gtcgccaagg	cgcacggcgg	ttattccgtg	ttcgaggcgg	480
tcgggtgagcg	tacccgtagg	ggcaacgacc	tttaccacga	aatgatcgag	tcggggcgtga	540
acaagctcgg	cggcgggcgaa	ggctccaagg	cagccctcgt	ttacggccag	atgaacgaac	600
ccccgggtgc	ccgcgcccgc	gttgcccttt	ccggtctgac	ggttgctgaa	aacttccgtg	660
accagggcca	ggacgttctg	ttcttcgtgg	acaacatctt	ccgcttcacg	caggcaggtt	720
cggaagtgtc	ggctcttctc	ggccgtattc	cttcgcgtgt	gggttatcag	ccgacgtcgg	780
caaccgacat	gggcgcgatg	caggaacgca	tcaccacgac	gaccaagggt	tcgatcacct	840
cg						842

<210> 256

<211> 833

<212> DNA

<213> *Cedecea davisae* ATCC 33431

<400> 256

cgagttccct	caggacggcg	taccgcgcgt	tkatgatgcg	cttgaagtac	aaaataacag	60
cgagcagctg	gtgctggaag	ttcagcagca	gctcggcggc	ggtatcgtgc	gtaccatcgc	120
tatgggttct	tccgacggtc	tgcgtcgtgg	tctggaagtt	aaagacctcg	agcacccgat	180
cgaagtcccg	gtaggtaaaag	cgacccttgg	ccgtatcatg	aacgtgctgg	gtcagccgat	240
cgacatgaaa	ggcgatatcg	gcgaagaaga	ccgttgggct	attcaccgcg	ctgcaccttc	300
ctatgaagag	ctgtccagct	ctcaggaact	gctggaaacc	ggcatcaaag	taatcgacct	360
tatctgtccg	ttcgctaagg	gcggtaaaag	aggtctgttc	ggtgggtgcg	gcgtgggtaa	420
aaccgtaaac	atgatggagc	ttatccgtaa	catcgcgatc	gagcactccg	gctactccgt	480
gtttgccggc	gtgggtgagc	gtactcgtga	gggtaacgac	ttctatcacg	aaatgaccca	540
ctccaacggt	ctggacaaaag	ttgccttggt	ttacggccag	atgaacgagc	caccgggtaa	600
ccgtctgcgc	gtagcgctga	ccggtctgac	catcgcggag	aaattccgtg	acgaaggctc	660
tgacgttctg	ctgttcgttg	ataacatcta	ccgttacacc	ctggccggta	ctgaagtata	720
cgcgctgctg	ggtcgtatgc	cttctgcggg	aggttaccag	ccaactctgg	cggaagagat	780
gggtgttctt	caggagcgta	ttacctccac	caagaccggg	tccatcacct	cgc	833

<210> 257

<211> 829

<212> DNA

<213> *Cedecea lapagei* ATCC 33432

<400> 257

ttccctcagg	acggcggtacc	gcgcgtatat	gacgcgcttg	aggtagacaga	taacagcgag	60
aagctggtgc	tggaagtcca	gcagcagctc	ggcgggcggt	tcgtacgtac	catcgcaatg	120
ggttcttccg	acgggtctgcg	tcgtggtctg	gaagtgaag	acctcgagca	cccgatcgaa	180
gtcccggtag	gtaaagcgac	tctgggtcgt	atcatgaacg	tgctgggtca	gccaattgat	240
atgaaaggcg	acatcggcga	agaagatcgt	tgggcgattc	accgcgcagc	accttcctat	300
gaagagctgt	ccagctctca	ggaactgctg	gaaaccggca	tcaaagtatt	cgacctgatt	360
tgtccggttc	ctaaggggcgg	taaagtgtgt	ctgttcgggtg	gtgcgggcgt	aggtaaaacc	420
gtaaacatga	tggagctgat	ccgtaacatc	gcgacgcagc	actccgggta	ctccgtgttt	480
gcaggcggtg	gtgagcgtag	tcgtgagggt	aacgacttct	accacgagat	gaccgactcc	540
aacgttcttg	acaaagtgtg	actggtttac	ggccagatga	acgagccgcc	aggtaaccgt	600
ctgcgcgtag	cgcgtaccgg	tctgaccatc	gcggagaaat	tccgtgacga	aggccgtgac	660
gttctgctgt	tcgtcgataa	catctatcgt	tataccctgg	ccggtacaga	agttttctgca	720
ctgctgggtc	gtatgccatc	tgccgtaggt	tatcagccta	ctctggcaga	agagatgggt	780
gttcttcagg	agcgtattac	ctccaccaag	accggttcca	tcacttccg		829

<210> 258

<211> 830

<212> DNA

<213> *Cedecea neteri* ATCC 33855

<400> 258

```
tccctcagga cggcgtaccg cgcgtttatg acgcgcttga ggtacagaac aacaatgaga 60
agctgggtgct ggaagtccag cagcagctcg gcggcggtat cgtgcgtacc atcgcaatgg 120
gttcttccga cgggtctgct cgtggctctg tagtaacaga cctcgagcac ccgatcgaa 180
tcccggtagg taaagcgacc cttggccgta tcatgaacgt gctgggtcag ccgatcgaca 240
tgaaaggcga catcggcgaa gaagaccgtt gggcgattca ccgcgcagca ccttcctacg 300
aagagctgtc cagctctcag gaattgctgg aaaccggcat caaagtatc gacctgattt 360
gtccgttcgc taagggcggt aaagttagtc tgttcgggtg tgccggcgta ggtaaaaccg 420
taaacatgat ggagctgatc cgtaacattg cgatcgagca ctccggttat tccgtgtttg 480
cgggcgtggg tgagcgtact cgtgagggtg acgacttcta ccacgaaatg accgactcca 540
acgttctgga taaagtagca ctggtttacg gccagatgaa cgagccacca ggtaaccgtc 600
tgccgctagc gctgaccggt ctgaccatcg cggaaaaatt ccgtgacgaa ggccgcgacg 660
ttttgctgtt cgttgataac atctaccgtt ataccctggc cggtagcgaa gtatctgcac 720
tgctgggtcg tatgccttct gcggtagggt atcagccaac tctggcagaa gagatgggtg 780
ttcttcagga gcgtattacc tccaccaaga ccggttctat cacctccgta 830
```

<210> 259

<211> 931

<212> DNA

<213> *Chryseobacterium meningosepticum* strain CDC B7681

<400> 259

```
tttcaggaag tagaggaact accaaacatt tatgacgcac ttgaagttgt cagagaaggc 60
cagaaagggtc tgatcttaga agttgaacaa cacatcggtg aggatacagt gagatgtatc 120
gctatggatg caacagacgg acttcaaaga ggacaatctg taataggaca tggaagacaa 180
attactatgc ctattgggtg agaagtaaat ggtagattgt tcaacgtggt aggagatgct 240
atcgacggac ttcaggaatt atctaaagac aatggtttgc caatccacag agaagcacct 300
aaattcgatc agttatcaac ttctgctgaa gtactatata caggatatcaa agtaatcgac 360
cttatcgagc cttatgcaaa aggtggtaaa attggtttgt tcggtggtgc tgggtgtaggt 420
aaaacagtat tgatccagga attgattaat aacattgcta aaggacacgg tggctcttct 480
gtattcgcag gtagtaggtg gagaacaaga gaaggaatg accttcttcg tgagatgtta 540
gagtctggta ttattaaata tggtagcga ttcatgcatt ctatggagaa cgggtggatgg 600
gatctttcta aagttgacag tgagttgatg aaagagtcta aagctgcttt cgttttcgga 660
cagatgaacg agccaccagg tgcaagagca cgtgtagccc tttctggtct tactttagct 720
gaatactacc gtgatgggtg cgaaagcgga caaggtagag acgttctttt cttcgtagac 780
aacatcttcc gttttacaca ggctggttct gaggtgtctg cacttctagg tcgtatgcct 840
tcagcggtag gttaccaacc aactctagct tctgagatgg gtgcaatgca ggagagaatt 900
acttcaacta aaaacggatc tattacatct g 931
```

<210> 260

<211> 726

<212> DNA

<213> *Citrobacter amalonaticus* ATCC 25405

<400> 260

```
gtatcgtacg taccatcgca atgggttctt ccgacggtct gcgtcgtggt ctggaagtca 60
aagacctcga gcacccgatc gaagtcccg taggtaaagc aaccctgggt cgtatcatga 120
acgtcctggg tcacccgatc gacatgaaag gcgatatcgg tgaagaagag cgttgggcta 180
tccaccgcgc agcaccgtcc tatgaagagc tgtccagctc tcaggaactg ctggaaaccg 240
gtatcaaagt tatcgacctg atgtgtccgt tcgcgaasgg cggtaaagtg ggtctgttcg 300
gtggtgcggg ttaggtgaaa accgtaaaaca tgatggagct tatccgtaac atcgcgatcg 360
agcactccgg ttactccgtg tttgcgggcg taggtgaacg tactcgtgag ggtaacgact 420
tctaccagca aatgaccgac tccaacgttc tggataaagt atccctggta tatggcca 480
tgaacgagcc gccgggaaac cgtctgcgcg ttgactgac cggctctgacc atggcagaga 540
aattccgtga cgaaggctcg gacgtactgc tgttcgtcga taacatctat cgttacaccc 600
tggccggtac ggaagtttcc gactgctgg gtcgtatgcc atcagcggtg ggttaccagc 660
cgacctggc ggaagagatg ggtgttctgc aggaacgtat cacttctacc aaaaccggtt 720
ctatca 726
```

<210> 261

<211> 812
<212> DNA
<213> *Citrobacter braakii* ATCC 43162

<400> 261
gccgtaccgc gcgtgtacga tgctcttgag gttatgaatg gtaaagagag cctgggtgctg 60
gaagttcagc agcagctcgg cggcgggtatc gtacgtacca tcgccatggg ttcttccgac 120
ggtctgcgtc gtgggtctgga agttaaagat ctcgagcacc cgatcgaagt cccggtaggt 180
aaagcaactc tgggtcgtat catgaacgtc ctgggtcacc cgatcgacat gaaagggcat 240
atcgggtgaag aagagcgttg ggctatccac cgcgcggcac ctccctatga agagctgtcc 300
agctctcagg aactgctgga aaccggcacc aaagttatcg acctgatgtg tccgttcgct 360
aagggcggta aagttgggtc gtccgggtgg gcggtgtgtag gtaaaaccgt aaacatgatg 420
gagctgatcc gtaacatcgc gatcgaacac tccggttact ccgtgtttgc gggcgtgggt 480
gaacgtactc gtgagggtaa cgacttctac cagaaatga ccgactccaa cgttctggat 540
aaagtatccc tgggtatatgg ccagatgaac gagccgcgg gaaaccgtct gcgcgttgct 600
ctgaccggtc tgaccatggc agagaagttc cgtgacgaag gtcgtgacgt tctgctgttc 660
gttgataaca tctatcgtta caccctggcc ggtacagaag tatccgctct gctgggtcgt 720
atgccatcag cggtaggcta ccagccgacc ctggcggaag agatgggtgt tcttcaggaa 780
cgtatcacct ctacaaaaac cggttctatc ac 812

<210> 262
<211> 811
<212> DNA
<213> *Citrobacter koseri* ATCC 27156

<400> 262
gcgcgtgtac gacgcccttg aggtgcagaa tggtaatgaa catctggtgc tgggaagttca 60
gcagcagctc ggtggcggta tcgtacgtac catcgccatg ggttcttccg acggcctgcg 120
tcgtgggtctg gatgtgaaag accttgagca cccgatcgaa gtcccggtag gtaaagcaac 180
gctgggtcgt atcatgaacg tactgggcga accagtagac atgaaaggcg agatcgggtga 240
agaagagcgt tgggtctatcc accgtgcggc accgtcctac gaagagttgt caaactctca 300
ggaactgctg gaaaccggta tcaaagttat cgacctgatg tgcccgttcg cgaagggcgg 360
taaagtgggt ctgttcgggtg gtgcgggtgt aggtaaaacc gtaaacatga tggagctgat 420
ccgtaacatc gcgatcgaa actccgggtta ctccgtgttt gcgggcgtag gtgaacgtac 480
tcgtgagggt aacgacttct accacgaaat gaccgactcc aacgttatcg acaaagtatc 540
cctggtttac ggccagatga acgagccgcc gggaaaccgt ctgcgcgttg cgctgaccgg 600
cctgaccatg gcggagaaat tccgtgacga aggtcgtgac gttctgctgt tcgtcgacaa 660
catctaccgt tacaccctgg ccggtacgga agtatccgca ctgctgggtc gtatgccttc 720
agcggtaggt taccagccga ccctggcgga agagatgggt gttttgcagg aacgtatcac 780
ctccacaaaa accggttcta tcacctccgt a 811

<210> 263
<211> 816
<212> DNA
<213> *Citrobacter farmeri* ATCC 51112

<400> 263
gatgccgtac cgcgcgtgta cgatgctctt gaggttatga atggtaaaga gagtctggtg 60
ctggaagttc agcagcagct cggcggcggt atcgtagta ccatcgcgat gggttcttcc 120
gacggtctgc gtctgtggtc ggaagtaaaa gacctcgaac acccgatcga agtcccggta 180
ggtaaagcaa ctctgggtcg tatcatgaac gtccctgggtc acccgatcga catgaaaggc 240
gatatcgggtg aagaagagcg ttgggtctatc caccgcgcag cgccatccta tgaagagctg 300
tccagctctc aggaactgct ggaaaccggg atcaaagtta tcgacctgat gtgtccgttt 360
gcgaagggcg gtaaagtcgg tctgttcggg ggtgcgggtg taggtaaaaac cgtaaacatg 420
atggaactca tccgtaacat cgcgatcgag cactccgggt actccgtgtt tgcgggcgta 480
ggtgaacgta ctctgagggt taacgacttc taccacgaaa tgaccgattc caacgttctg 540
gataaagtat ccctggtata tggccagatg aacgagccgc cgggaaaccg tctgcgcgtt 600
gcgctgaccg gtctgaccat ggcagagaaa ttccgtgacg aaggctcgtg cgtactgctg 660
ttcgtcgata acatctatcg ttacaccctg gccggtacgg aagtatccgc actgctgggc 720
cgtatgccat cagcggtagg ctaccagcca accctggcgg aagagatggg tgttctgcag 780
gaacgtatca cttctaccaa aaccggttct attacc 816

<210> 264

<211> 819
 <212> DNA
 <213> *Citrobacter freundii* ATCC 8090

<400> 264
 aggatgccgt accgcgcgtg tacgatgctc ttgaggttat gaatggtaaa gagagcctgg 60
 tgctggaagt tcagcagcag ctgcggcggc gtatcgtaac taccatcgcc atgggttctt 120
 ctgacggtct gcgtcgtggt ctggaagtta aagacctcga gcacccgatc gaagtcccgg 180
 taggtaaaagc aacgctgggt cgtatcatga acgttctggg tcacccgatc gacatgaaag 240
 gcgatatcgg tgaagaagag cgttgggcta tccaccgtgc agcaccttcc tacgaagagc 300
 tgtcaagctc tcaggaactg ctggaaaccc gtatcaaagt tatcgacctg atgtgtccgt 360
 tcgctaaggc cggtaaagtt ggtctgttcg gtggtgcggg ttaggtataa accgtaaaca 420
 tgatggagct gatccgtaac atcgcgatcg aacactccgg ttactccgtg tttgcgggcg 480
 taggtgaacg tactcgtgag ggtaacgact tctaccacga aatgaccgac tccaacgttc 540
 tggacaaaagt atccctggta tatggccaga tgaacgagcc gcctggaaac cgtctgcgtg 600
 ttgcgctgac cggctctgacc atggctgaga agttccgtga cgaaggctcg gacgttctgc 660
 tgttcgttga taacatctat cgttacaccc tggccggtag agaagtatct gcaactgctg 720
 gtcgtatgcc atcagcggta ggctaccagc cgaccctggc ggaagagatg ggtgttctgc 780
 aggaacgtat cacctccacc aaaaccggtt ctatcacct 819

<210> 265
 <211> 822
 <212> DNA
 <213> *Citrobacter koseri* ATCC 27028

<400> 265
 gatgccgtac cgcgcgtgta cgacgccctt gaggtgcaga atggtaatga acatctgggtg 60
 ctggaagtcc agcagcagct cgggtggcgg atcgtaacga ccatcgccat ggggttcttcc 120
 gacggcctgc gtcgtgggtc ggatgtgaaa gaccttgagc acccgatcga agtcccggta 180
 ggtaaagcaa cgctgggtcg tatcatgaac gtactgggcg aaccagtaga catgaaaggc 240
 gagatcgggtg aagaagagcg ttgggctatc caccgtgcgg caccgtccta cgaagagttg 300
 tcaaactctc aggaactggt ggaaaccggt atcaaagtta tcgacctgat gtgtccgttc 360
 gcgaagggcg gtaaagtggg tctgttcggt ggtgcggggt taggtaaaac cgtaaacaatg 420
 atggagctga tccgtaacat cgcgatcgaa cactccggtt actccgtggt tgcgggcgta 480
 ggtgaacgta ctctgtaggg taacgacttc taccacgaaa tgaccgactc caacgttatc 540
 gacaaagtat ccttggttta cggccagatg aacgagccgc cgggaaaccg tctgcgcgtt 600
 gcgctgaccg gcctgaccat ggcggagaaa ttccgtgacg aaggtcgtga cgttctgctg 660
 ttcgtcgaca acatctaccg ttacaccctg gccggtacgg aagtatccgc actgctgggt 720
 cgtatgcctt cagcggtagg ttaccagcgg accctggcgg aagagatggg tgttttgcag 780
 gaacgtatca cctccaccaa aaccggttct atcacctccg ta 822

<210> 266
 <211> 820
 <212> DNA
 <213> *Citrobacter sedlakii* ATCC 51115

<400> 266
 gatgccgtac cgcgcgtgta cgacgccctt gaggtacaga atggtaatga gcgtctgggtg 60
 ctggaagtcc agcagcagct cgggtggcgg attgtacgta ccatcgccat ggggttcttcc 120
 gacggtctgc gtcgtgggtc ggaagtataa gaccttgagc acccgatcga agtcccggta 180
 ggtaaagcaa cgctgggtcg tatcatgaac gtactgggcg aaccagtaga catgaaaggc 240
 gacatcgggtg aagaagagcg ttgggctatc caccgtgccg cgccgtccta tgaagagttg 300
 tctaactctc aggaactgct ggaaaccggc atcaaagtta tcgacctgat gtgtccgttc 360
 gcgaagggcg gtaaagtccg tctgttcggt ggtgcgggcg taggtaaaac cgtaaacaatg 420
 atggagctga tccgtaacat cgcgatcgag cactccggtt actctgtggt tgcgggcgta 480
 ggtgaacgta ctctgtaggg taacgacttc taccacgaaa tgaccgactc caacgttatc 540
 gacaaagtat ccttggtgta cggccagatg aacgagccgc ctggaaaccg tctgcgcgtc 600
 gcaactgacc gtctgaccat ggctgagaag ttccgtgacg aaggtcgtga cgttctgctg 660
 ttcgtcgata acatctatcg ttacaccctg gccggtacgg aagtatccgc actgctgggt 720
 cgtatgcctt cagcggtagg ttatcagccg actctggcgg aagagatggg tgttctgcag 780
 gaacgtatca cctcaaccaa aaccggttct atcacctccg 820

<210> 267

<211> 806
<212> DNA
<213> *Citrobacter werkmanii* ATCC 51114

<400> 267
gccgtaccgc gcgtgtacga tgctcttgag gttatgaatg gtaaagagag cctgggtgctg 60
gaagttcagc agcagctcgg cggcggtatc gtacgtacca tcgccatggg ttcttccgac 120
ggtctgcgtc gtggtctgga agttaaagac cttgagcacc cgatcgaagt cccggtaggt 180
aaagcaaccc tgggtcgtat catgaacgtc ctgggtcatc cgatcgacat gaaaggcgat 240
atcgggtgaag aagagcggtg ggctatccac cgcgcagcac ctacctatga agaactgtcc 300
agttctcagg aactgctgga aaccggcatc aaagttatcg acctgatgtg tccggttcgcg 360
aagggcggtg aagttgggtc gttcgggtggt gcgggtgtag gtaaaaccgt aaacatgatg 420
gagctgatcc gtaacatcgc gatcgaacac tccggttact cagtgtttgc gggcggtggt 480
gaacgtactc gtgagggtaa cgacttctac cacgaaatga ccgactccaa cgttctggac 540
aaagtatccc tgggtatatg ccagatgaac gagccgccgg gaaaccgtct gcgcggttgcg 600
ctgaccggtc tgaccatggc tgagaaagttc cgtgacgaag gtcgtgacgt tctgctgttc 660
gttgataaca tctatcggtt caccctggcc ggtagcgaag tatctgcact gctgggtcgt 720
atgccatcag cggtaggcta ccagccaacc ctggcggaag agatgggtgt tctgcaggaa 780
cgtatcacct ctacccaaaac cggttc 806

<210> 268
<211> 810
<212> DNA
<213> *Citrobacter youngae* ATCC 29935

<400> 268
gccgtaccgc gcgtgtacga tgctcttgag gttatgaatg gtaaagagag cctgggtgctg 60
gaagttcagc agcagctcgg cggcggtatc gtacgtacca tcgccatggg ttcttccgac 120
ggtctgcgtc gtggtctgga agttaaagac ctcgagcacc cgatcgaagt cccggtaggt 180
aaagcaacgc tgggtcgtat catgaacggt cttgggtcacc cgatcgacat gaaaggcgat 240
atcgggagaag aagagcggtg ggctattcac cgcgcagcac ctacctatga agagctgtcc 300
agctctcagg aactgctgga aaccggcatc aaagttatcg acctgatgtg tccggttcgct 360
aagggcggtg aagttgggtc gttcgggtggt gcgggtgtag gtaaaaccgt aaacatgatg 420
gagcttattc gtaacatcgc gatcgaacac tccggttact ctgtgtttgc ggggtgtagt 480
gaacgtactc gtgagggtaa cgacttctac cacgaaatga ccgattccaa cgttctggat 540
aaagtatccc tgggttatgg ccagatgaac gagccgccgg gaaaccgtct gcgcggttgcg 600
ctgaccggtc tgaccatggc tgagaaattc cgtgacgaag gtcgtgacgt actgctgttc 660
gtcgataaca tctatcggtt taccctggcc ggtacggaag tatccgcact gctgggtcgt 720
atgccatcag cggtaggtta ccagccgacc ctggcggaag agatgggtgt tctgcaggaa 780
cgtatcactt ctacccaaaac cggttctatc 810

<210> 269
<211> 827
<212> DNA
<213> *Clostridium innocuum* ATCC 14501

<400> 269
ttgagaacgg agatttgccg cagctattga ccgctattga aattcctctg aaagacagtg 60
aatctctgat tgtcgaagtt gctcagcata tcgggtgatg acgtgtccgc tgtatcgcta 120
tgggcgggtac agatgggtctg gttcgtggaa tgggaagccat tgatacagga tccgcaatcc 180
gtgtaccggg gggaaaagaa attctgggaa gaatgttcaa tgcctcggg cgtgaaattg 240
atggtctggg acctgtagga acggataaca cactgccgat ccacagacag gcaccgggct 300
ttgaggagca gcagacatcc gcagaaatgc tggaaacagg aattaagggtc attgacctgt 360
tatgtccata ttccaagggt ggtaagattg gtttgtttgg tgggtcgggg gtaggtaaaa 420
ccgtactgat tcaggagctg attcataata tcgccaagga acatgggtgga atgtccgctc 480
ttaccgggtg aggggagaga acccggtgaag gaaacgacat gtatcatgaa atgaaggaca 540
gcgggtgtcct tgataagacc gtactgggtt acggacagat gaatgaatca ccgggtgcc 600
gaatgcgtgt cggctcgacc gggctgacga tggcggaata tttcgtgat cagaccatc 660
aggatgtatt gctgtttatt gataaatatt tccgttttac ccaggcgga agtgaagtaa 720
gtgccctgct gggacgtatg ccaagtgcag taggctatca gccgacactt gcgacagaaa 780
tgggacagct gcaggagcgc attacatcca cgaaggatgg ttccatt 827

<210> 270

<211> 829
 <212> DNA
 <213> Clostridium perfringens ATCC 13124

<400> 270
 gcaaatgatg aacttcctaa tatatttaat gcaatacaca taaaaatgga cgatggaaaa 60
 atcttagttt gtgaggtaga gcaacacgta ggagacgata tagttagaac tatagctatg 120
 gaagctactg aaggactaag aagagggtgta gaagctgttg atacaggagc acctatatca 180
 gtaccagttg gtgaatgcgt attaggaaga atattttaacg tattaggtaa accactagat 240
 agtggagctg aagttaataa cgaagaaaaa tatccaattc atagaccagc tccatcattt 300
 gaagaacaat cagttgttcc tcaaatgttt gagacaggaa taaaggttat cgacctttta 360
 gcaccttacc aaagaggggg aaaaatcggg ctatttggag gtgcagggtg tggtaaaaca 420
 gttcttatcc aagagcttat aaacaacata gctaaagagc acggtggact ttctgtattc 480
 acaggagttg gagaaagatc aagagaaggt aatgaccttt actatgaaat gatggaatca 540
 ggagttataa aaaatacagc attagtattt ggacaaatga acgaaccacc tggagcaaga 600
 atgagagttg ctttaacagg acttactatg gctgagtact tcagagacca aggtcaagac 660
 gtgttattat tcatagataa catattcaga ttctcacaag ctggatcaga ggtttcagct 720
 ttattaggaa gaataccatc agctgttggt taccaaccaa ctcttgctac agagatggga 780
 gctcttcaag agagaatcac atcaactacc catggatcaa ttacatcag 829

<210> 271
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 271
 ttgtccacgt tggatrtctt ca 22

<210> 272
 <211> 818
 <212> DNA
 <213> Corynebacterium diphtheriae ATCC 27010

<400> 272
 cccgcgtggc gagctgccgg cactgtacaa cgcgttgact gtcgagggtca ccctcgaggc 60
 agtcgctaag accattaccc ttgaggttgc ccagcacttg ggcgacaacc tcgttcgcgc 120
 cgtgtccatg gcccctaccg acggcctcgt ccgtgggtgct gttgtgaccg actcgggcaa 180
 gccaatctcc gtgccagttg gcgacgttgt taaaggccac gttttcaacg cactggggcga 240
 ttgcttggat gagccaggtc tcggccgcga tggtagagcag tgggggaattc accgcgatcc 300
 accaccattc gatcagctcg aaggttaagac cgaaatcctc gagaccggta ttaagggtcat 360
 cgacttgctc accccttacg ttaagggcgg caagattggt ctgttcgggtg gtgcagggtg 420
 gggtaagacc gtgctcatcc aggagatgat cactcgtatt gctcgcgagt tctccggtac 480
 ctccgtcttc gctggcggtg gtgagcgtac ccgtgagggc accgacctct tctcgaat 540
 ggaagaaatg ggcgttcttc aggacaccgc tctcgtgttc ggccagatgg acgagccacc 600
 aggagtccgt atgcgcgttg ctctgtccgg tctgaccatg gcggagtact tccgcgatgt 660
 tcagcaccag gacgtgcttc tgttcacga taacattttc cgtttcaccc aggcgggttc 720
 cgagggtttc acccttcttg gtcgtatgcc ttccgcgctg ggttaccagc caaccttggc 780
 tgacgagatg ggtgttctcc aggagcgtat tacctcta 818

<210> 273
 <211> 833
 <212> DNA
 <213> Corynebacterium pseudodiphtheriticum ATCC 10700

<400> 273
 cgatgcctgc tctgtacaac gcgctgactg tcgaggtcac cctcgaggca gtcgccaaaga 60
 ccatcacgct tgaggttgca cagcacctcg gcgataacct gatccggacc attgcgttgg 120
 cacctacgga cgggtctcgtc cgtggcgctg aggttatcga cactggtaag ccaattactg 180
 ttcccgcgct cgatgccgtc aaaggacacg tcttcaatgc gtcgggtgag tgtttggacg 240

aaccaggatt	gggcccgcgac	ggcgaacagt	ggggaatcca	ccgcgatccg	ccaccattcg	300
atgcgctgga	gggcaaaaacc	gagattctgg	agactgggaat	caaggttatc	gacctcctta	360
ccccttacgt	taaggggtggc	aaaatttggtc	tgttcgggtgg	cgccggcgctc	ggcaagaccg	420
ttcttatcca	ggaaatgatac	actcgatatcg	ctcgtaaactt	ctccggtaact	tccgtgttcg	480
ccggcgctcg	tgagcgatacc	cgtgaggggta	ctgacctgtt	cctggaaatg	gaagagatgg	540
gcgtgttgca	agacaccgcc	cttgtcttcg	gtcaaatgga	cgaaccacca	ggggttcgtg	600
tgcgcgtggc	cttgtctggg	ctaaccatgg	ctgaatatatt	ccgcgacgtt	caaaaaccagg	660
acgttttgtt	gttcattgac	aacatcttcc	gttttactca	ggcagggttcc	gagggtttcca	720
cgctgttggg	ccgtatgcct	tccgccgtgg	gttatcagcc	aacattggct	gatgagatgg	780
gtgttttgca	ggaacggatt	acctctacac	gtggtaagtc	aattacttcc	ctg	833

<210> 274

<211> 417

<212> DNA

<213> *Corynebacterium ulcerans* NCTC 8665

<400> 274

ccgtgtctcat	ccaggagatg	atcacccgtg	tggcccgcgaa	cttcggcgggc	acctctgtgt	60
tcgccggcgt	cggcgagcgc	acccgtgagg	gcaacgacct	ctgggtcgag	atggacgagg	120
ccgacgtgct	caaggacacc	gccctgggtg	tcggccagat	ggacgagccg	ccgggaaccc	180
gtctgcgcgt	ggccctgtcc	gcgctgacca	tggcggagta	cttcgcgat	gtgcagaacc	240
aggacgtgct	gctgttcatc	gacaacatct	tccgtttctc	ccaggccggc	tccgaggtct	300
ccaccctgct	gggccgcgat	ccctccgcgg	tgggctacca	gccgaacctg	gcggacgaga	360
tgggtgtgct	gcaggagcgc	atcacctcga	ctcgcggcca	ctccatcacc	tcgatgc	417

<210> 275

<211> 835

<212> DNA

<213> *Corynebacterium urealyticum* ATCC 43042

<400> 275

gggcagcagc	cagcactatt	caacgcgctg	cacgtcgagg	ttgacctcga	ggcagttgcg	60
aagaccatta	ccctggaggt	cgcacagcac	ctgggtgaca	acctggtgcg	caccgtctcc	120
atggccccga	ccgacggcct	ggtccgcggt	gcagaggcca	aggacaccgg	taagccgatc	180
tctgtgccag	tcggcgatgt	tgtcaagggg	cacgtcttca	acgccctggg	cgactgcctg	240
gatgagccag	gtctcggccg	cgacggcgag	cagtggggca	tccaccgcga	gccaccggca	300
ttcgacgagc	tcgagggtaa	gaccgagatc	ctggagaccg	gcgttaaggt	catcgacctg	360
ctgacccctt	acgtcaaggg	cggcaagatt	ggcctcttcg	gtggtgcagg	tgtgggtaag	420
accgtcctga	ttcaggagat	gattaccctg	atcgcccgcg	agttctccgg	tacctccgtg	480
ttcgccggcg	tcggcgagcg	taccctgtgag	ggtacggacc	tcttcctcga	gatggaggag	540
atgggcgtgc	tccaggacac	cgcgctgggt	ttcggtcaga	tggatgagcc	gccgggagtc	600
cgtatgcgcg	tggctctgtc	cggctctgacc	atggcggagt	acttccgcga	tgttcagggc	660
caggacgtgc	tgctgttcat	cgacaacatc	ttccgtttca	cccaggcagg	ttctgaggtc	720
tccacgctgc	tcggccgcat	gccgtccgca	gtgggttacc	agccgacctt	ggctgacgag	780
atgggtgttc	tgcaggagcg	cattacctcc	acgaagggta	agtccattac	ctccc	835

<210> 276

<211> 818

<212> DNA

<213> *Coxiella burnetii* strain Nine Mile phase II

<400> 276

cccgtcacgc	tgtcccgaaa	gtgtacgatg	ctttgcaggt	ggatgaaaat	aatttaacgc	60
tcgaagtcca	acagcaactc	ggggacgggtg	tcgtgcgcac	aattgccatg	ggcagcactg	120
agggcttaaa	acgcgatatac	gccgtaaaaa	atacggaaaa	accgattgaa	gttcccgtag	180
gaaaagaaac	tttaggtcgt	atcatgaacg	tgctgggtga	gccgatcgat	gagttaggtc	240
ccattaattc	aaaagaaaaa	ctccctattc	atcgtcctgc	gccgagcttt	attgagcaat	300
ctggcgctac	cgaattatta	gaaaccggta	ttaaagtggg	cgatttgctt	tgcctctttg	360
ctaagggagg	caaagtgggt	ctttttggag	gcgcggggcgt	tggaaaaacg	gttaatatga	420
tggaaattaat	ccgtaatatc	gccattgaac	acagcggtta	ttctgttttt	gcgggtgtgg	480
gagaaagaac	cgagaaggc	aatgattttt	atcatgaaat	gaaagaatcc	aatgtcttgg	540
ataaagtggc	gttgggtgtac	ggacaaatga	acgagccgcc	agggaaaccgc	ttgcgggtgg	600
gtttgacggg	gcttacgctg	gcggaagcct	tccgtgacga	aggacgcgac	gttctgttat	660

ttatcgcataa	tatcttttcgt	tacacttttgg	caggggttga	agtctctgcc	ctcctcggtc	720
ggatgccatc	ggctgtgggt	tatcagccga	cgttggccga	agagatgggg	gccctgcaag	780
aacgcattac	ttccactaaa	aaaggggtcca	ttacgtcg			818

<210> 277
<211> 829
<212> DNA
<213> *Edwardsiella hoshinae* ATCC 33379

<400> 277						
ttccccgagg	acgccgtgcc	gaagggtgtat	aacgcactgg	aagtaaaaagg	cggtgccacg	60
aaactggtac	tgggaagtga	gcagcagctg	ggtggcgccg	tagttcgctg	catcgcgatg	120
ggctcttccg	acggtctgcg	ccgtgggcta	gaggttgaag	accaagacca	tccgatcgag	180
gttctctgtg	gcaaggcgac	tctgggccgt	atcatgaacg	tactgggtga	tccggtcgac	240
atgaaggcg	agatcggtga	agaagagcgt	tgggctatcc	atcgtgctgc	accgagctat	300
gaagatctgt	ctaactctca	ggaactgctg	gagaccggca	ttaaggttat	cgacctgatt	360
tgcccgttcg	ctaaaggcgg	taaagtgggc	ctgttcgggtg	gggccgggtg	gggtaagacc	420
gttaacatga	tggagcttat	ccgtaacatc	gctatcgagc	actccgggtta	ctcagtcctc	480
gccgggtgtg	gtgagcgtac	ccgtgagggg	aacgacttct	accacgagat	gaccgattcc	540
aacgtatttg	ataaagtttc	tctggtgtat	ggtcagatga	accgagccacc	gggaaaccgt	600
ctgcgcgtgg	cgctgaccgg	tctgaccatg	gcggagaaat	tccgtgatga	aggtcgtgat	660
gtactgttgt	tcacgcataa	catctaccgt	tataccttgg	ccggtactga	agtctccgct	720
ctgctgggcc	gtatgccgtc	ggcggtaggt	tatcagccga	ctctggcgga	ggaaatgggg	780
gtgctgcaag	agcgtattac	ctccactaag	accgggtcca	tcacctctg		829

<210> 278
<211> 809
<212> DNA
<213> *Edwardsiella tarda* ATCC 15947

<400> 278						
gccgtgccga	aggtgtataa	cgcactggaa	gtaaaaggcg	gtgccacgaa	actgggtactg	60
gaagtgcagc	agcagctggg	tggcggcgtc	gttcgctgca	tcgcgatggg	ctcctccgac	120
ggtctgcgcc	gtgggctggg	ggttgaagac	caagaccatc	cgatcgaggt	tccgggtcgg	180
aaggcgaccc	tgggccgtat	catgaacgta	ctgggtgatc	cggtcgacat	gaagggcgag	240
atcggcgaag	aagagcgttg	ggctatccac	cgcgcggcgc	cgagctatga	agatctgtcc	300
aactctcagg	agctgctgga	gaccggcatc	aaggttatcg	acctgatttg	cccgttcgcc	360
aaaggcgga	aagttggcct	gttcggtggg	gccggtgtgg	gtaagaccgt	taacatgatg	420
gagcttatcc	gtaacatcgc	tatcgagcac	tccggttact	ccgtatttgc	cggtgtaggc	480
gagcgtaccc	gtgagggtaa	cgacttctac	cacgagatga	ccgactccaa	cgtattggat	540
aaagtttctc	tggatatacg	ccagatgaat	gagccgcggg	gaaaccgtct	gcgtgtggcg	600
ttgaccggta	tgaccatggc	ggagaaatc	cgtgatgaag	gtcgcgatgt	gttggtgttc	660
atcgataacc	tttatcggtt	taccttggct	gtaccggaag	tttctgtctc	gctgggtcgt	720
atgccgtcgg	cggttaggtta	tcagccgacc	ctggcggaag	agatgggtgt	gttgcaagag	780
cgtatcacct	caacgaagac	gggctctat				809

<210> 279
<211> 840
<212> DNA
<213> *Eikenella corrodens* ATCC 23834

<400> 279						
tttccgcgta	ccgccattcc	gcgtgtttac	gatgcactca	aactgggtga	tactgatttg	60
acgctggaag	tacagcagca	gcttggtgac	ggcgttgtcc	gtaccattgc	gatgggtagt	120
acagacgggt	tgaaacgtgg	cttggctgtg	caaaatactg	gtgcaccgat	tactgtgccg	180
gtggggaaaag	ccaccctagg	cgcacatcat	gcggttcttg	gcaaccccg	ggacgaacaa	240
ggtccgatcg	gttctgacca	aaccctgtgt	attcatcaat	ttgcacctaa	gttcgacgaa	300
ctctccagca	ctaccgaatt	gttggaacaa	ggcattaaag	tgatcgattt	gctttgtccg	360
tttgctaaaag	gtggtaaaag	gggtctgttt	ggcggtgccg	gtgtgggcaa	aaccgtgaac	420
atgatggagc	tgattaacaa	cattgccaaa	gcgcacagt	gtctttccgt	attcgccgg	480
gtgggtgagc	gtactcgtga	aggtaacgac	ttctaccacg	aaatgaaaga	ctccaacgtg	540
ttggataaag	tggcaatgg	gtatggccag	atgaacgagc	cgcctggtaa	ccgcttgccg	600
gttgctctaa	ctggtttgtc	gatggctgaa	tacttccgtg	acgaaaaaga	cgaaaacggc	660

aaaggccgtg	acgtattatt	ctttgtggat	aatatctacc	gtataactct	ggcgggtacc	720
gaagtgtcgg	ctctgcttgg	ccgtatgcct	tctgctgtgg	gttatcagcc	aactttggct	780
gaagaaatgg	gtcgttttga	ggagcgtatt	acctccaccc	aaactgggtc	cattacctct	840

<210> 280

<211> 803

<212> DNA

<213> *Enterobacter agglomerans* ATCC 27989

<400> 280

gccgtaccac	gagtgtacga	tgcacttgag	gtaaagaatg	gtgaagagcg	tctgggtgctg	60
gaagttcagc	aacagctcgg	cgggtggcgtt	gtacgtacca	tcgcaatggg	ttcttctgat	120
ggtctgcgtc	gtgggtctgga	agtaacggac	ctgggtcacc	cgatcgaagt	cccggtaggt	180
aaagcaacac	tgggtcgtat	catgaacgta	ctgggcgaac	cagtagacat	gaaagggcag	240
atcgggtgaag	aagagcgttg	ggcgatccac	cgtgcagcac	cgctctacga	agagttgtca	300
aactctcagg	aactgctgga	aaccgggtatc	aaagttatcg	acctgatgtg	tccgttcgct	360
aagggcggta	aagtgggtct	gttcgggtggt	gcgggtgtag	gtaaaaccgt	aaacatgatg	420
gagcttattc	gtaacatcgc	gatcgagcac	tccggttact	ctgtgtttgc	gggcgtaggt	480
gaacgtactc	gtgagggtaa	cgacttctac	cacgaaatga	ccgactccaa	cgttatcgac	540
aaagtatccc	tggtgtatgg	tcagatgaac	gagccgcggg	gaaaccgtct	gcgcgttgcg	600
ctgaccggtc	tgaccatggc	tgagaagttc	cgtgacgaag	gtcgtgacgt	actgttgttc	660
gttgacaaca	tctaccgtta	caccctggcc	ggtacggaag	tatccgcact	gctggggcgt	720
atgccttctg	cggtagggtta	tcagccgacg	ctggcggaag	agatgggcgt	tctgcaggaa	780
cgtatcacct	ccaccaaacc	cgg				803

<210> 281

<211> 833

<212> DNA

<213> *Enterobacter amnigenus* ATCC 33072

<400> 281

cgaattccct	caggatgccg	taccgcgcgt	gtacgatgct	cttgagggtac	agaatggtaa	60
cgagagtctg	gtgctggaag	ttcagcagca	gctcgggtgg	ggatatcgta	gtactatcgc	120
catgggttct	ttccgacggc	tgctgcgtgg	tctgggtgtt	aaagatctcg	aacacccgat	180
cgaagtcccc	gtaggtaaag	caacactggg	tcgtatcatg	aacgttttgg	gtcaaccaat	240
cgacatgaaa	ggcgacatcg	gtgaagaaga	ccgttgggca	atccaccgtg	cagcaccttc	300
ctatgaagag	ctgtctagct	ctcaggaact	gctggaaacc	ggcatcaaag	ttatcgacct	360
gatgtgtccg	ttcgctaagg	gcggtaaagt	tggtctgttc	ggcgggtgcg	gcgtgggtaa	420
aactgtaaac	atgatggagc	tgatccgtaa	catcgcgatc	gagcactccg	gttactccgt	480
gtttgcaggc	gtgggtgagc	gtactcgtga	gggtaacgac	ttctaccacg	aatgaccga	540
ttccaacgtt	ctggataaag	tatccctggt	ttatggccag	atgaacgagc	caccaggaaa	600
ccgtctgcgc	gttgcgctga	ccggtctgac	tatggctgag	aagttccgtg	acgaaggctg	660
tgacgtatcg	ctgttcgtag	ataacatcta	ccgttacacc	ctggccggta	ctgaagtatc	720
tgcgctgctg	ggccgatatg	cttcagcggg	aggttaccag	ccgaccctgg	cggaagagat	780
ggcggttctg	caggaacgta	tcacttctac	caaaaccggg	tctatcacct	ccg	833

<210> 282

<211> 810

<212> DNA

<213> *Enterobacter asburiae* ATCC 35953

<400> 282

gccgtaccac	gcgtgtacga	cgcgcttgag	gtacagaatg	gtaacgagag	cctgggtgctg	60
gaagttcagc	agcagctcgg	cggcggtatc	gtgcgtacca	tcgcgatggg	ttcttccgac	120
ggtctgcgtc	gtgggtctgga	agtcaaagac	cttgagcacc	cgatcgaagt	cccggtaggt	180
aaagcaacac	tgggtcgtat	catgaacgta	ttgggtcaac	caatcgacat	gaaagggcag	240
atcgggtgaag	aagagcgttg	ggctatccac	cgcgcgccac	cttcctacga	agagctgtcc	300
agctctcagg	aactgctgga	aaccgggtatc	aaagttatcg	acctgatgtg	tccgttcgct	360
aagggcggta	aagtcgggtct	gttcgggtggt	gcgggtgttg	gtaaaaccgt	aaacatgatg	420
gagctgatcc	gtaacatcgc	gatcgagcac	tccggttact	ccgtgtttgc	gggcgtaggt	480
gaacgtactc	gtgagggttaa	cgacttctac	cacgaaatga	ccgactccaa	cgttctggac	540
aaagtatccc	tggttttacgg	ccagatgaac	gagccaccag	gaaaccgtct	gcgcgttgcg	600
ctgaccggtc	tgacgatggc	tgagaagttc	cgtgatgaag	gccgtgacgt	tctgctgttc	660

gttgataaca	tctatcggtta	caccctggcc	ggtacggaag	tatctgcact	gctgggtcgt	720
atgccttcag	cggtaggtta	ccagcctacg	ctggcggaag	agatgggtgt	tcttcaggaa	780
cgtatcacct	ctacaaaaac	cggttctatc				810

<210> 283

<211> 811

<212> DNA

<213> Enterobacter cancerogenus ATCC 35317

<400> 283

gccgtaccgc	gcggtgtacga	tgctcttgag	gtacagaatg	gtaacgagag	cctgggtgctg	60
gaagttcagc	agcagctcgg	cggcggtatc	gtacgtacta	tcgccatggg	ttcttccgac	120
ggtctgcgtc	gtggtctgga	agtaaaaagac	cttgagcacc	cgatcgaagt	cccggtaggt	180
aaagcaacac	tgggtcgtat	catgaacgta	ttgggtcaac	caatcgacat	gaaagggcag	240
atcgggtgaag	aagagcggtg	ggctatccac	cgcgcagcac	cttcctacga	agagctgtcc	300
agctctcagg	aactgctgga	aaccggcatc	aaagttatcg	acctgatgtg	tccgttcgcg	360
aagggcggtg	aagtcgggtc	gttcgggtgg	gcgggtgtag	gtaaaaccgt	aaacatgatg	420
gagctgatcc	gtaacatcgc	gatcgagcac	tccggttatt	ccgtgtttgc	gggctgtggg	480
gaacgtactc	gtgagggtaa	cgacttctac	cacgaaatga	ccgactccaa	cgttctggat	540
aaagtatccc	tggtgtacgg	ccagatgaac	gagccaccag	gaaaccgtct	gcgcgttgcg	600
ctgaccggcc	tgaccatggc	tgagaagttc	cgtgacgaag	gtcgtgacgt	actgctgttc	660
gttgataaca	tctaccgtta	caccctggcc	ggtaccgaag	tatctgcact	gctgggtcgt	720
atgccttcag	cggtaggtta	tcagcctacg	ctggcggaag	agatgggtgt	tcttcaggaa	780
cgtatcacct	caacaaaaac	cggttctatc	a			811

<210> 284

<211> 817

<212> DNA

<213> Enterobacter cloacae ATCC 13047

<400> 284

gccgtaccac	gcggtgtacga	cgcgcttgag	gtacagaatg	gtaacgagag	cctgggtgctg	60
gaagttcagc	agcagctcgg	cggcggtatc	gtgcgtacca	tcgcgatggg	gtcttccgac	120
ggtctgcgtc	gtggtctgga	agttaaaagac	cttgagcacc	cgatcgaagt	cccggtaggt	180
aaagcaacac	tgggtcgtat	catgaacgta	ttgggtcagc	caatcgacat	gaaagggcag	240
atcgggtgaag	aagagcggtg	ggctatccac	cgcgcggcac	cttcctacga	agagctgtcc	300
agctctcagg	aactgctgga	aaccggatc	aaagttatcg	acctgatgtg	tccgtttgcg	360
aagggcggtg	aagtgggtct	gttcgggtgg	gcgggtgtag	gtaaaaccgt	aaacatgatg	420
gagctgatcc	gtaacatcgc	gatcgagcac	tccggttact	ccgtatttgc	gggctgtagg	480
gaacgtactc	gtgagggtaa	cgacttctac	cacgaaatga	ccgactccaa	cgttctggac	540
aaagtatccc	tggttttacgg	ccagatgaac	gagccaccag	gaaaaccgtct	gcgcgttgcg	600
ctgactggtc	tgacgatggc	tgagaagttc	cgtgacgaag	gccgtgacgt	tctgctgttc	660
gttgataaca	tctaccgtta	caccctggcc	ggtaccgaag	tatctgcact	gctgggtcgt	720
atgccttcag	cggtaggtta	tcagcctacg	ctggcggaag	agatgggtgt	tcttcaggaa	780
cgtatcacct	ctacaaaaac	cggttctatc	acttccg			817

<210> 285

<211> 766

<212> DNA

<213> Enterobacter gergoviae ATCC 33028

<400> 285

aatgagagcc	tggtgctgga	agttcagcag	cagctcggcg	gcggtatcgt	gcgtaccatc	60
gcaatgggtt	cttctgacgg	tctgcgtcgc	ggtctggaag	ttaaagatct	cgaacatccg	120
atcgaagtc	cggtaggtta	agcgaccctc	ggccgtatta	tgaacgtgct	gggtcagccg	180
gttgatatga	aaggcgatat	cggcgaagaa	gagcgttggg	cgatccaccg	cgctgcgccg	240
tcctatgaag	agctctccag	ctctcaggaa	ctgctggaaa	ccggtatcaa	ggtaattggac	300
ctgatttgcc	cgttcgcgaa	gggcggtaaa	gtcgggtctgt	tcggcggtgc	gggctgtggg	360
aaaaccgtaa	acatgatgga	gctgatccgt	aacatcgcca	tcgagcactc	cggctactcc	420
gtggtttcgg	gcgtgggtga	acgtactcgt	gagggttaacg	acttctacca	cgaaatgacc	480
gactccaaac	ttatcgacaa	agtatccctg	gtgtacggcc	agatgaacga	gccgcgggga	540
aaccgtctgc	gcgtggcgct	gaccggtctg	accatggctg	agaaattccg	tgacgaaggt	600
cgtgacgttc	tgctgttcgt	cgataacatc	taccgctata	ccctcgccgg	tactgaagta	660

tccgcactgc tgggccgtat gccttctgca gtaggttacc agccgacgct ggcggaagag 720
atgggtgttc tgcaggaacg tatcacctcc accaaaaccg gttcta 766

<210> 286
<211> 805
<212> DNA
<213> Enterobacter hormaechei ATCC 49162

<400> 286
gccgtaccac gcggtgtacga cgcgcttgag gtacagaatg gtaacgagag cctgggtgctg 60
gaagttcagc agcagctcgg cggcgggtatc gtgcgtacca tcgccatggg ttcttccgac 120
ggctctgcgtc gtggtctgga agtgaaagac cttgagcacc cgatcgaagt cccggtaggt 180
aaagcaacgc tgggtcgtat catgaacgta ttgggtcagc caatcgacat gaaaggcgac 240
atcgggtgaag aagagcggtt ggctatccac cgcgcggcac cttcctacga agagctgtcc 300
agctctcagg aactgctgga aaccggcatc aaagttatcg acctgatgtg tccgtttgcg 360
aaggggcggt aagttgggtc gtccgggtggt cggggtgtag gtaaaaccgt aaacatgatg 420
gagctgatcc gtaacatcgc gatcgcagc tccggttact ccgtgtttgc gggcgtgggt 480
gaacgtactc gtgagggtaa cgacttctac cacgaaatga ccgactccaa cgttctggac 540
aaagtatccc tggtttacgg ccagatgaac gagccaccag gaaaccgtct gcgcgttgcg 600
ctgactggcc tgacgatggc tgagaagttc cgtgacgaag gccgtgacgt tctgctgttc 660
gtcgataaca tctaccgtta caccctggcc ggtacggaag tatctgcact gctgggtcgt 720
atgccttcag cggtaggtta tcagccaacg cttgcggaag agatgggtgt tcttcaggaa 780
cgtatcacct cgacccaaac cgggt 805

<210> 287
<211> 791
<212> DNA
<213> Enterobacter sakazakii ATCC 29544

<400> 287
tacgacgccc ttgaggtaac gaatggtaat gagcgtctgg tgctggaagt ccagcagcag 60
ctcggcggcg gtatcgtacg taccatcgcg atgggtcttt ccgacgggtc gcgtcgcggg 120
ctgcctgttg cagaccttga gcacccgatc gaagtgcgg taggtaaagc gacgtgggt 180
cgtatcatga acgtcctggg tcagcctatc gacatgaaag gcgacatcgg cgaagaagag 240
cggtggcgca ttcacgcgc gcgcgcgtcc tatgaagagc tgtccagctc tcaggaactg 300
ctggaaaccg gcatcaaagt tatcgacctg atgtgtccgt tcgcgaaggg cggtaaagtc 360
ggctctgttc gtggtgcagg tgtaggtaaa accgtaaaca tgatggagct tattcgtaac 420
atcgcgattg agcactccgg ttactccgtg ttgcggggcg tgggcgaacg taccctgaa 480
ggtaacgact tctaccagca aatgaccgac tccaacgtac tggataaagt atccctgggt 540
tacggccaga tgaacgagcc gccgggaaac cgtctgcgcg ttgcgctgac cggcctgacc 600
atggctgaga aattccgtga cgaaggctcg gacgttctgc tgttcgtcga caacatctac 660
cgttacaccc tggccggtac tgaagtatcc gcaactgctg gccgtatgcc ttcagcggta 720
ggttatcagc cgaccctggc ggaagagatg ggtgttctgc aggagcgtat cacctccacc 780
aaaaccgggt c 791

<210> 288
<211> 839
<212> DNA
<213> Enterococcus avium ATCC 14025

<400> 288
tttcttttag tcaatcctta ccagacatca acaatgcgtt gattgtttac aaaaaagata 60
aaacaaaagt tgttcttgaa gttgctttgg aacttggtga tgggtgttatc cgcacaatcg 120
ctatggaggc tactgatgga ttgcaacgtg gaatggaagt tgctgatact ggcaaatcaa 180
tctccgttcc tgtaggtaaa gatactctag gtcgtgtgtt taacgtatta ggtgaaacga 240
ttgataaaga agcacccttt ccagaagatg cagaaagaag cggcattcat aaaaaggcgc 300
ctgctttttg agaccttagt acaagtaacg agattttgga aacagggatc aaggttatcg 360
acttattagc cccttattta aaagggtggga aagtcggact attcgggtggg gccgggtgtg 420
gtaaaaccgt tttgatccaa gaattaattc ataatatcgc ccaagaacac ggtgggtattt 480
cagtgtttac cgggtgttggg gaacgtactc gtgaaggga cgcaccttat tatgaaatga 540
aagactctgg cggttattgag aaaacagcca tgggtgttcg acaaataaac gagccgcctg 600
gtgcacgtat gcgtgttgcc ttgactgggt tgacattagc tgaatatctt cgtgatgaag 660
aaggacaaga tgtgttgcta tttattgaca acatcttccg ctttactcaa gccggatcag 720

aagtttctgc cttattagga cgtatgccat cagccgttgg gtatcaacca actttggcaa 780
ctgaaatggg gcaattacaa gaacgaatca cttcaaccaa aaaaggttcg atcacttca 839

<210> 289
<211> 847
<212> DNA
<213> *Enterococcus casseliflavus* ATCC 25788

<400> 289
ttctctctag accaatcatt accagatatc aacaatgcgt tgattgttta caaaaaagat 60
gagcagaaaa caaaagtgtg gttagaagct gccttagaac ttggcgacgg cgttatccgt 120
acgattgcca tggaatcaac agatggctta caacgaggaa tggaagtaat cgatacaggc 180
gcctccattt ctgttccagt tgggacagaa accttaggac ggggtgtttaa tgtcttaggg 240
gacaccatcg atttagaagc gccgttccct gaagaagcac cccgcagtgg gattcacaaa 300
aaagcacctg actttgatga attgtcaaca agtacggaga tccttgaaac tgggatcaaa 360
gttatcgatt tgtagcccc ttatttaaaa ggggggaaaag ttggactttt cgggtggtgcc 420
gggtgttggt aaaccgtctt gatccaagaa ttgatccaca acatcgccca agagcatggt 480
gggatctctg tcttcacagg tgttggtgaa cggacacgtg aaggaaatga cctttataat 540
gaaatgaaag aatctggcgt tatcgaaaaa acagccatgg tgtttggaca aatgaacgaa 600
ccaccaggtg ctccggatgcg ggtagccttg actggtttga cattagccga gtacttccgt 660
gatgtggaag gacaagacgt gctcttggtt atcgataata tcttccgctt cactcaagca 720
ggttctgaag tatctgcctt actaggtcgg atgccgtctg ccgttgggta tcagccaaca 780
ttagcaactg agatggggca attacaagaa cggatcacat cgacgaagaa aggttccggtt 840
acgtcta 847

<210> 290
<211> 845
<212> DNA
<213> *Enterococcus durans* ATCC 19432

<400> 290
tttcttttaga ccaatcctta ccagatatca acaacgcttt agttgtttat aaaaatgatg 60
agaagaaatc gaaagtgtgt cttgaaacag cgctagaatt aggtgacggt gtcacccgta 120
caatcgcgat ggaatcaaca gatgggtttac aacgcggaat ggaagtcatt gatacagaaa 180
aagcaatttc tgtaccagtg ggtaaaagaaa cgttagggtcg tgtattcaat gtattaggag 240
atacgatcga tttatctgca cctttcccag aagatgcaaa acgtagcgaa atccataaaa 300
aagcaccaaa ctttgatgag ttaagtacaa gtactgagat ccttgaaact gggatcaaag 360
ttattgactt gcttgctcct tacttaaaaag gtgggaaagt tggattattc ggtggtgccg 420
gtgtaggtaa aactgtattg atccaagaat tgatccataa tatcgctcaa gaacacggtg 480
gtatttctgt atttactggt gttggtgaac gtacacgtga aggtaatgac ctttattatg 540
aatgaaaga ttcaggagtt attgaaaaaa cagccatggt gtttgggtcaa atgaacgaac 600
caccaggtgc acgtatgcgt gttgccttga ctggtttgac gattgctgaa tacttccgtg 660
atgttgaaag gcaagacgtg ctattgttta ttgataatat tttccgtttc actcaagccg 720
gttcagaagt ttctgccta ttaggtcgtg tgccttctgc cggttgggtac caaccaacgc 780
tagcaacaga aatgggtcaa ttacaagaac ggatcacttc aacgaaaaaa ggttcaatca 840
cttca 845

<210> 291
<211> 840
<212> DNA
<213> *Enterococcus faecalis* ATCC 29212

<400> 291
ttagatcaat ccttaccgga tattaacaac gcttttagtcg tttataaaaa tggcgaagca 60
aaacaaaaag tagtacttga agtcgcttta gaactagggtg atggagtgat tcgttctatc 120
gccatggaaat cgacagatgg tttacaacgt ggaatggaag ttatcgatac aggaaaatca 180
atttcagttc ctgttggttaa agatacatta ggtcgtgtgt ttaacgtttt aggagacaca 240
attgacttag aagcgccatt ccctgcagat gctgaacgta gtgggattca taaaaaagcg 300
ccagcatttg atgaattaag taccagtaat gaaatttttag aaacagggat taaagtattt 360
gacttattag caccttatct aaaagggtggt aaagtccggac ttttcggtgg tgccggtggt 420
ggtaaaacct tcttaattca agaattaatt cccaagaaca tggagggatt 480
tccgtcttta ctggtgttgg tgaacggaca cgtgaaggga acgatctgta ctatgaaatg 540
aaagattcag gcgttattga aaaaacagcc atggtttttg gtcaaataaa cgaaccgcca 600

```
ggtgcacgga tgcgtgtggc cttaactggg ttaacgattg ctgaatattt ccgtgatgtg 660
gaaggacaag acgtgtctatt atttattgat aacattttcc gtttcaccca agccggttca 720
gaagtttctg cccttttagg tcggatgccg tcagccgttg gttaccaacc aaccttagcg 780
actgaaatgg gacaattaca agaacggatt acttcaacga aaaaaggatc aattacctct 840
```

<210> 292

<211> 831

<212> DNA

<213> *Enterococcus faecium* ATCC 19434

<400> 292

```
tttctttaga ccaatcctta ccagatatca acaacgcatt agttgtttat aaaaatgacg 60
aaaataaatc aaaagttggt cttgaagcag cgtagaatt aggggacgga gtgatccgga 120
ccattgcatg ggaatcaaca gatggtttac aaagaggaat ggaagtcatt gatacaggga 180
aagcaatctc tggttcctgta ggtaaagaaa cattaggtcg cgtattcaac gtactaggag 240
atacgatcga tttagaaaca cctttcccag aagatgcgga aagaagcgaa attcataaaa 300
aagcaccagc ctttgacgaa ttaagtacaa gtacagaaat tttggaaaca gggatcaaaag 360
ttatcgattt gcttgcccca tatttaaaaag gtgggaaagt cggactattc ggtgggtgccg 420
gtgttggttaa aaccgtactg atccaagaac tgatccataa tatcgcccaa gaacatgggtg 480
gtattttctgt atttaccggg taggtgaac gtactcgtga aggtaatgac ttgtattatg 540
aatgaaaaga ttcaggagtt atcgaaaaaa cagccatggt gttcggacaa atgaacgaac 600
caccaggtgc acgtatgcgt gttgctttga ctgggttgac gattgcggaa ttttccgtg 660
atgtagaagg tcaagatgta ctgttgttta tcgacaacat tttccgtttc actcaagctg 720
gatctgaagt atcagccttg ttaggacgga tgcttctgc ggttggttat caaccaacat 780
tggcaacaga aatgggtcaa ttgcaagaac gtatcacatc tacgaaaaaa g 831
```

<210> 293

<211> 826

<212> DNA

<213> *Enterococcus gallinarum* ATCC 49573

<400> 293

```
ccttaccaga tatcaacaat gcgttgatcg tttacaaaaa agacgagaaa aaaacaaaag 60
tagtattgga agccgcttta gaactagggg atgggtgtgat ccgcaccatc gcaatggaat 120
ctacagacgg tttgcaacga ggaatggaag tcatcgatac cgggtgcctca atctctgtcc 180
ctgtaggaac agatactcta ggccgagtat ttaatgtact aggcgatact atcgacttgg 240
aagcaccatt cccagaagat gccaaacgta gtggcatcca caaaaaagcc ccagatttcg 300
atgaattgtc aacaagtaca gaaatccttg aaactgggat caaagttatc gatttattag 360
ctccttactt aaaaggtggt aaagtcggct tggtcgggtg tgccggtggt ggtaaaaccg 420
tattgattca agaattgatt cacaatatcg ctcaagagca tgggggaatt tcagtattta 480
ccggtgttgg cgaacggacg cgtgaaggta atgacttgta ttatgaaatg aaagaatcag 540
gcgttatcga aaagacagcc atgggttttc gtcaaatgaa tgaaccacca ggtgcccgga 600
tgccgggttgc tttgactggt ttgaccattg ctgagtattt ccgtgacgtt gaaggacaag 660
atgtgctctt gtttatcgat aatattttcc gtttcacaca agcgggttct gaagtatctg 720
ccttgttagg ccggatgcca tcagccgttg gttatcaacc aactctagca actgaaatgg 780
gtcaattaca agaacgaatc acttctacga aaaaaggatc tgtaac 826
```

<210> 294

<211> 846

<212> DNA

<213> *Enterococcus saccharolyticus* ATCC 43076

<400> 294

```
tttcttttga ccaatcctta ccagacatca acaatgcgtt ggtgggtctat aaaaagaatg 60
atgaaaaaac aaaagtggta cttgaaacag ctttagaact tgggtgatggt gtcgtacgta 120
cgattgctat gtcgtcaaca gacggtttgc aacgtgggat ggaagtcac gatacaggag 180
catcaatttc tggttcctgtt gggaaagaga cattaggacg tgtatttaac gttttagggg 240
agactatcga cttagatggg ccattcccag aagaagtagc acgagatggg attcataaaa 300
aggcacctga ttttgatgaa ttaagtacaa gtacggagat tcttgaaaca gggattaaag 360
taatcgattt attagcgctt tacttaaaaag gtgggaaagt tgggtttattc ggtgggtgccg 420
gtgtaggtaa aacggtatta attcaagaat tgattaacaa tattgcgcaa gaacatgggtg 480
gtatttcagt atttgcgggt gttggtgagc gtactcgtga aggaaatgac ctttattatg 540
aaatgaaaga gtcgggcgtt attgagaaaa cagcgatggg ttttggacaa atgaacgaac 600
```

```
caccaggtgc acgtatgcga gttgctttaa ctggtttaac cattgcagaa tactttccgtg 660
atgttgaagg acaagatgta ttactattta ttgataacat tttccgtttt actcaagctg 720
gttcagaagt ttcagcttta ttaggacgta tgccttcagc ggtagggtat caaccgacat 780
tagcaacaga aatgggacaa ttacaagaac gtattacgtc aacgaaaaaa ggctcaatta 840
catcaa
```

<210> 295
<211> 803
<212> DNA
<213> *Escherichia fergusonii* ATCC 35469

```
<400> 295
gccgtaccgc gcggtgtacga tgctcttgag gtgcaaaatg gtaatgagcg tctgggtgctg 60
gaagttcagc agcagctcgg cggtggtatc gtgcgtacca tcgcaatggg gtcctccgac 120
ggctctgcgtc gcggtctgga tgtaaaagac ctcgaacacc cgatcgaagt cccggtaggt 180
aaagcgactc tgggccgtat catgaacgta ctgggtgaac cggtcgacat gaaagggcag 240
atcgggtgaag aagagcgttg ggcgattcac cgcgcagcac ctccctacga agagctgtca 300
aactctcagg aactgctgga aaccgggtatc aaagttatcg acctgatgtg tccgttcgct 360
aagggcggtg aagtcgggtc gttcgggtggt gcgggtgtag gtaaaactgt aaacatgatg 420
gagcttattc gtaacatcgc gatcgaacac tccgggttact ctgtgtttgc gggcgtaggt 480
gaacgtactc gtgagggtaa cgacttctac cagcaaatga ctgactccaa cgttatcgac 540
aaagtatccc tggatatatg ccagatgaac gagccgccgg gaaaaccgtc ggcggttgca 600
ctgaccggcc tgaccatggc tgagaaatcc cgtgacgaag gtcgtgacgt tctgctgttc 660
gttgacaaca tctatcggtt caccctggcc ggtacggaag tatccgcact gctgggcccgt 720
atgccttcag cggtagggtt tcagccgact ctggcggaag agatgggcgt tcttcaggaa 780
cgtatcacct ccacaaaaac tgg
```

<210> 296
<211> 822
<212> DNA
<213> *Escherichia hermannii* ATCC 33650

```
<400> 296
gatgccgtac cgcgcgtgta cgatgctctt gaggtgcaaa atggtgatga gcgtctggtg 60
ctggaagtgc agcagcagct cggcgccggg atcgtgcgta ccatcgcaat gggttcttcc 120
gacggtctgc gtcgtggtct gactgtcgtc gacctcgagc acccgatcga agtcccggta 180
ggtaaagcga ccttgggccc tatcatgaac gtgctgggtc agccgatcga catgaaaggc 240
gatatcggtg aagaagagcg ttgggcgatt caccgcgcgg cgcgcctcta tgaagagctg 300
tccagctctc aggaactgct ggaaaccggc atcaaagtta tcgacctgat gtgtccgctc 360
gcgaagggcg gtaaagtcgg tctgttcggg ggtgcgggcg taggtaaaac cgtaaacatg 420
atggagctga tccgtaacat cgcgatcgag cactccggtt actctgtgtt tgcggggcgtg 480
ggtgaacgta ctctgtaggg taacgacttc taccatgaaa tgaccgactc caacgttctg 540
gacaaagtat ccttggttta cggccagatg aacgaaccgc cgggaaaccg tctgcgcgtt 600
gactgaccg gcttgaccat ggctgagaaa ttccgtgacg aaggtcgtga cgttctgttg 660
ttcgtcgaca acatctaccg ttacaccctg gccggtactg aagtatccgc actgctgggc 720
cgtatgcctt ctgcggtagg ttaccagccg accctggcgg aagagatggg cgttctgcag 780
gagcgtatca cctccaccaa aaccggttct atcacctccg ta
```

<210> 297
<211> 808
<212> DNA
<213> *Escherichia vulneris* ATCC 33821

```
<400> 297
ccgaacgtgt acgacgccct cgaagtgaca aatggtaatg agcgtctggt gctggaagtt 60
cagcagcagc tcggcgccgg tatcgtacgt accatcgcta tgggttcttc cgacggtctg 120
cgtcgtggtc tggaaagtta ggacctcgag caccgatcga aagtgcgggt aggtaaagcg 180
accctgggtc gtatcatgaa cgtactgggt cagccgatcg atatgaaagg cgacatcggt 240
gaagaagagc gttgggctat tcaccgtgca gcaccgtcct atgaagagct ctccagctct 300
caggaactgc tggaaaccgg catcaagggt atcgacctga tgtgtccggt cgccaagggc 360
ggtaaagtcg cctgttcgg cggcgcgggc gtgggtaaaa ccgtaaacat gatggagctg 420
atccgtaaca tcgcgatcga gcactccggt tactccgtgt ttgcaggcgt gggtagcgt 480
actcgtgagg gtaacgactt ctaccacgag atgaccgact ccaacgttct ggacaaagta 540
```

```
tcctctggtgt acggccagat gaacgagccg ccgggaaacc gtctgcgcgt ggccactgacc 600
ggcctgacca tggctgagaa gttccgtgac gaaggtcgtg acgtttctgct gttcgttgac 660
aacatctatc gttacaccct ggccgggtacg gaagtatctg cactgctggg ccgtatgcct 720
tcagcggtag gttaccagcc gacgctggcg gaagagatgg gcgttctgca ggagcgtatc 780
acctccacca aaaccgggttc tatcacct 808
```

<210> 298
<211> 843
<212> DNA
<213> *Eubacterium lentum* ATCC 43055

```
<400> 298
tttccccctg atcagctgcc ggcgatttac aacgcgctga cggttgatgc caagaccctg 60
gcgggcgact tgcacctcgt gctcgaggtc gagacgcacc tgccgggcaa cttgtccgc 120
tcggtggcca tgagctcgac ggacggtctc gtccgcggcc tcgaggtcgt cgacacgggc 180
aacccgatca tgatgcccggt gggtcccgag accctgggtc gcatctggaa cgtcatgggc 240
gagcccgctc acgagaagcc gatgcccag gtgaagggct acatgcccac ccaccgtccg 300
gtcccgact acgacgagct gtccaccacc accgagatct tcgagaccgg catcaaggcc 360
atcgacctcg tcgagccctt cgtcaagggc ggcaagacgg gtctgttcgg cggcgcgggc 420
gtgggcaaga cggttatcat ccaggagctc atcaacaacc tggcccagga gcacggcggc 480
acgtcgggtg tcacgggcgt gggcgagcgt accgcgagg gtaccgacct ctacctggag 540
atgagcgact cgggcgtcat caacaagacc tgccctcgtg acggtcagat gaacgagcct 600
ccgggagcgc gtctgcgcgt ggggtctcgg ggccctaccg aggcggagta cttccgcgat 660
cagggccagg acgtgcttct gttcgtggac aacatcttcc gcttcacgca ggccggctcc 720
gaggtgtccg ctctgctggg ccgcatgcc tctgcgctgg gttaccagcc gacgctggca 780
accgagatgg gcgacctgca ggagcgcac acgtcgacgt ccaccggctc catcacgtcc 840
gtg 843
```

<210> 299
<211> 829
<212> DNA
<213> *Ewingella americana* ATCC 33852

```
<400> 299
tcctcagga tgcagtaccg aacgtgtaca atgctcttga ggtagaaaac ggtgcctcca 60
aactggttct ggaagttcag caacagttag gcggcggtcgt tgttcgttgt atcgcaatgg 120
gtacctcaga cggccttcgt cgcggtctga aagtgaacaa cctggaacac ccaattgaag 180
ttccggttgg taaagcgact ctgggtcgta tcatgaacgt attgggtgaa ccaatcgaca 240
tgaaaggtag aatcggcgaa gaagaacgctc gtgcaattca ccgtccagcg ccttcttatg 300
aagagctggc taactcccaa gaattgctgg aaaccggtat caaagttatg gacctgatgt 360
gtccgttcgc taagggcggt aaagtcggtc tggtcgggtg tgccgggtgtt ggtaaaactg 420
taaactatgat ggagctgac cgtaacatcg cgatcgagca ctccggttac tcagtgtttg 480
caggcgtggg tgagcgtact cgtgagggtta acgacttcta ccacgaaatg actgactcca 540
acgttatcga caaagtttcc ctggtctatg gtcagatgaa tgagccacca ggttaaccgtc 600
tgcgcgttgc actgaccggc ctgaccatgg cggagaaatt ccgtgatgaa ggtcgtgacg 660
tactgctgtt cgttgacaac atttaccgtt acaccctggc aggtaccgaa gtgtccgcac 720
ttctgggccc tatgccatcg gcggtagggt atcagccaac gctggcgga gagatgggtg 780
ctctgcaaga gcgtatcacc tctacaaaaa gtggttctat cacctcgt 829
```

<210> 300
<211> 805
<212> DNA
<213> *Francisella tularensis* strain LVS

```
<400> 300
aacacgccta aagtatatga tgctttaaat gtagtagaag ctggtttagt attagaagtt 60
cagcaacaaa ttggtgatgg cgtagttcgt acaattgcta tgggatctag tgatggctct 120
agacgtggta tggaagttaa gaacacaaat gcgcctatct ctgttccagt tggacatggc 180
acacttggac gtatcatgaa tgtttttaggt gaaccaattg atgaagctgg tccaattgaa 240
tatactgaga aaagatctat ccataaagct cctcctgcat atgatgagtt agcattaaagt 300
acagaaatat tagaaacagg tatcaaagta gttgacctta tttgtccatt tgctaagggc 360
ggtaaaagtt gtttatattg cggtgcaggt gttggtaaaa ctgtaacgat gatggaactt 420
atcaacaata ttgcaaaaaga acatagtggc tactctgtat tttccgggtg tggtgaaaga 480
```

actcgtgaag	gtaatgactt	ctactatgag	atgaaatatt	ctaattgtatt	ggataaagta	540
tcattagtat	atgggtcagat	gaatgagccg	cctggaaaca	gattaagagt	agctcttagt	600
ggcttaacaa	tagcagaagg	attccgtgat	gaaaagcgtg	atgttttgat	gtttatcgat	660
aacatctatc	gttatacatt	agcaggtaca	gaggtatcgg	cgctacttgg	tcgtatgcc	720
tctgctgtgg	gttatcagcc	aacgcttgca	gctgagatgg	gtgctttaca	ggagcgtatt	780
acatctacta	agacaggatc	tatta				805

<210> 301

<211> 825

<212> DNA

<213> *Fusobacterium gonidiaformans* ATCC 25563

<400> 301

gacgaattgc	caaaaatata	caatgcatta	aagggtgcaag	ttggagaaaa	agaacttgta	60
ttggaagtgc	aacaacattt	gggaaataat	gttgtgagaa	cagtagcgat	ggactcaaca	120
gatggattgc	ttcgaggaat	ggaagtaatg	gataccggag	caccgattac	tggtccagta	180
gggaaggcgg	tttttaggaag	aatattgaat	gttttgggag	agcctgtgga	tcaaaaaggg	240
cctgtggaaa	cagaagaata	tttacctatc	catagagaag	caccaaatt	tgaagaacaa	300
gaaacagtaa	cagaaatttt	tgaaacagga	attaaagtca	tagatttggt	agccccttat	360
atcaaaggag	gaaagacagg	tctattcggg	ggagccggag	tagggaaaaac	agttttaatt	420
atggaattaa	ttaataacat	tgcaaagggc	cacggaggaa	tttctgtgtt	tgaggaggtt	480
ggagaaagaa	caagagaagg	aagagattta	tacaacgaaa	tgacagagtc	cggagttttg	540
aataagacct	cgttggtgta	tggtcaaatg	aatgagccgc	ccggagcaag	acttcgtgtg	600
gcgttgacag	gattaacggg	tgctgaaaac	tttagagata	aagaagggca	agatgtattg	660
ttgtttatcg	acaatatctt	ccgtttcaca	caagcaggat	cagaagtatc	ggctctattg	720
ggaagaattc	catcggcagt	aggatatcaa	ccgaacttag	cgacagaaat	gggaacttta	780
caagaaagaa	ttactttctac	aaaatcagga	tctatcactt	cggt		825

<210> 302

<211> 806

<212> DNA

<213> *Fusobacterium necrophorum* subsp. *necrophorum* ATCC 25286

<400> 302

acaatgcatt	aaaggtagag	gtggggagaaa	gggaacttgt	gttggaagtg	cagcaacatt	60
taggaaataa	tggtgtcaga	acagtagcaa	tggtattcaac	agacggatta	cttcggggaa	120
tggaagttag	agatacagga	gttccccatta	ctgttccggg	aggaaaggcg	gttttgggaa	180
gaatattaaa	tgtcttaggg	gagcctgtgg	acgaaaaagg	tccgatagag	acagaagaat	240
atttaccat	acatagagaa	gcaccgaaat	ttgaagaaca	ggaaacgggtg	acagaaattt	300
ttgaaacagg	aattaaagtc	attgatttgt	tagctcctta	tattaaagga	ggaaaaacag	360
gcctattcgg	aggagccgga	gtaggaaaaa	ccgtttttgat	tatggaactg	atcaataata	420
ttgcaaaagg	tcatggagga	atttctgttt	ttgcaggagt	tgagagaaaga	acgagagagg	480
gaagagatct	atacaacgaa	atgacagagt	ccggagtttt	gaataaaact	tcttttggtat	540
atgggcaaat	gaatgagccg	cccggagcaa	gacttcgagt	ggctttaacc	ggacttactg	600
ttgccgaaaa	tttcagagat	aaagagggac	aggatgtctt	attgttcatt	gacaatattt	660
tccgtttcac	acaagcagggt	tccgaagtat	cggcactttt	ggggagaatt	ccttctgcag	720
tgggatatca	accgaacttg	gcgacagaaa	tggaagcgtt	acaagaaaga	attacttcta	780
caaaatccgg	ttctatcact	tccgtg				806

<210> 303

<211> 821

<212> DNA

<213> *Fusobacterium nucleatum* subsp. *polymorphum* ATCC 10953

<400> 303

gatgaattgc	ctgcaatata	taatgcttta	aaagtaaaat	tagaagataa	ggaaacttggt	60
ctagaagttg	aacaacatct	tggtacaat	gttgtaagaa	ctgttgctat	ggattcaact	120
gatggattaa	aaagaggaat	ggaagttata	gatacaggta	aaccaattac	agtaccagtt	180
ggtaaagctg	ttcttggtag	aatattaaat	gttttaggag	aacctgttga	taatcaaggt	240
cctataaaatg	ctgaaacatt	tttacctatt	catagagaag	caccagaatt	tgatgactta	300
gaaactgaaa	ctgaaatatt	tgaaacagga	ataaaagtta	tagacttatt	agcaccatat	360
attaaaggtg	gaaaaatagg	attatttggt	ggagctggag	taggaaaaac	agttttaata	420
atggaactta	tcaacaacat	tgcaaaagga	catggaggaa	tttcagtttt	tgaggaggtt	480


```

ggagaaagaa caagagaagg tagagactta tatggtgaaa tgactgaatc aggagttatc 540
acaaaaaacag ctcttggtta tggacaaaatg aatgagccac ctggagcaag acttagagtt 600
gcattaacag ggcttactgt tgcagaaaac tttagagata aagatgggca agatgttctt 660
ctatttatag ataatatatt tagattttaca caagcagggt cagaagtttc agctttactt 720
ggaagaatac catcagctgt tggatatcaa ccaaacctag caactgaaat ggggtgcttta 780
caagaaagaa taacatctac aaaatctggt tcaattacat c 821

```

<210> 304
 <211> 864
 <212> DNA
 <213> *Gardnerella vaginalis* ATCC 49145

```

<400> 304
ttcccagttg gctatcttcc agatattttat aatgctctca aggttgatat caacaccgtt 60
ggaaacacgg agggagatac cgtccacgag attacattgg aagttgagca gcaccttggg 120
gattcaactg tgcgagcagt ggcaacttaag cctacggacg gcttggtccg tgggtgcttta 180
gtgcgagata ctggtggccc aatttctgtg cctgttggag atgttacaaa aggtcacgtt 240
tttgacgtaa ctggttaacat tttaaacgct aaaccaggcg aaaacattga ggtgaccgag 300
cgctggccaa tccaccgcaa cccacctgct ttcatcagc ttgagtctaa gactcaaatg 360
tttgaaacag gcattaaggt tatcgatttg cttacgcctt acgttcaggg cggaaagatt 420
ggctctgttcg gtggtgcagg cggttgtaaa actgtgttga ttcaggagat gattcagcgc 480
ggtgcacaga accacggcgg tgtgtctgtg tttgctggcg ttggcgaacg tactcgtgag 540
ggtaacgatt tgattggcga aatggctgag gctggcggtt tggagaaaac agcgcttgtc 600
tttggtcaga tggatgagcc tcctgggact cgtcttcgtg tgcctcttac tgctttgact 660
atggctgagt atttccgtga tgttcagaat caggatgtgt tgctgtttat cgacaacatc 720
ttccgcttta ctcaggcagg ttctgaggtt tccacgttgc ttggtcgtat gccttctgca 780
ggttggttatc agccaaactt ggcggatgaa atgggtgcgt tgcaggagcg cattacttct 840
acgcgcggtc attctattac gtcg 864

```

<210> 305
 <211> 848
 <212> DNA
 <213> *Gemella haemolysans* ATCC 10379

```

<400> 305
tcgaatcagg gcatatgcc aatctattaa acgcttttaga agtttacata gaaaaaggcg 60
atgggaaaaa agaaaaatta gttcttgaag tttctcttga aattggtgat aacgtagtaa 120
gaacaatcgc tatgtcatct actgatggat taaatagggg agcagaagta gtatatacag 180
gagcaccatc tacagttcct gtaggtaact acacattagg tcgtgtgttc aacgtattag 240
gtgaagcagt tgaccacggg gaagaagcag gagcagaagt tcgtaaagat tcaattcaca 300
aagaagctcc aacattcgat gaattatcaa ctcacgttga ggttcttgaa acaggtatta 360
aagttatcga cttacttgca ccatatatta aaggtggtaa aatcggtctt ttcggtggg 420
cgggagttgg taaaacgggt cttatccaag aacttatcaa caacgttgcg caacaacacg 480
gtggattatc agtattcaca ggtgtaggtg agcgtactcg tgaaggaaat gacttatact 540
atgaaatgaa agattctggt gttattaaca aaacagccat ggtattcgga caaatgaacg 600
aaccaccagg tgctcgtatg cgtgtagcat taacaggatt aacaatggcg gaatacttcc 660
gtgatgaaga aggacaagac gtgcttctat tcacgataa cattttccgt ttcacacaag 720
caggttctga ggtttctgcg ttattaggac gtatgccatc agccgttggt taccaaccaa 780
cacttgctac agagatggga cgtttacaag aacgtataac atcaactaaa aaaggttctg 840
ttacatct 848

```

<210> 306
 <211> 848
 <212> DNA
 <213> *Gemella morbillorum* ATCC 27824

```

<400> 306
tcgaatcagg gcatatgcct aatctactaa acgcttttaga agtttatata gaaaaaggcg 60
atgggaaaaa agaaaaatta gttcttgaag tttctcttga aatcggggat aatgtcgtaa 120
gaactattgc gatgtcatct actgatggat taaacagagg ggcagaagta gttgatactg 180
gagcgccaat tacagtgcga gtaggtaact atacattagg acgtgtgttc aacgtattag 240
gtgaagcagt tgaccacgga gaagaagctg gagcagaagt tcaaaaagaa tctattcata 300
aagaagctcc aactttcgaa gaattatcaa cacatgttga ggtattagaa acaggtatta 360

```

```

aagttatcga ccttcttgcga ccatatatta aaggtggttaa gattggacta ttcggtggtg 420
ctggagttgg gaaaacagtt cttatccaag aacttattaa caacgtagca caacaacacg 480
gaggactttc agtatttact ggggtaggtg aacgtactcg tgagggtaac gacttgtact 540
atgaaatgaa agactctgga gttattaata aaactgccat ggtatttggg caaatgaatg 600
agccaccagg tgcacgtatg cgtgttgccg taacaggatt aacaatggca gagtacttcc 660
gtgatgaaga aggacaagac gtactattat ttatcgataa tatcttccgt ttcacacaag 720
cagggctctga ggtatctgca ttattagggc gtatgccttc agccggttga tatcaaccaa 780
ctcttgcaac agaaatggga cgtcttcaag aacgtattac atcaactaaa aaaggatctg 840
ttacatct

```

<210> 307
 <211> 813
 <212> DNA
 <213> *Haemophilus ducreyi* DSM 8925

```

<400> 307
gatgcagtac caaaagtata tgatgcttta aaagttgaat caggtttaac cttagaagtt 60
caacaacaat taggtggtgg ttttagtacgt tgtatcgcat taggtacctc agatgggtta 120
aagcgtagct taaaggttgt aaatacaggt aaccctattc aagttcctgt aggcactaaa 180
acattaggcc gtattatgaa tgtattaggc gaaccaattg atgaaaaagg acctattagc 240
gaagaagctc gttgggatat tcatcgtgcg gctccaaatt atgaagaaca gtcaaatagt 300
actgaattac ttgaaaccgg tatcaaagtt attgacttaa tttgtccatt tgcaaaaggt 360
ggtaaagtcg gcttatttgg tggagctggg ttaggtaaaa ccggttaatat gatggaattg 420
atccgtaata ttgctattga gcactcaggt tattcgggtt ttgctgggtg aggtgagcgt 480
actcgtgaag gtaatgattt ttatcatgaa atgacggatt ctaatgtatt agataaagta 540
tcactagtat atgggtcaaat gaatgaacca ccaggtaacc gcctacgtgt tgcgttaaca 600
ggtttaacta tggctgaaaa attccgtgat gaaggtcgtg atgtattatt tttcgtagat 660
aatatttatc gttatacttt agccggtaca gaagtttctg ctttattagg ccgtatgcca 720
tcagcggtag gttatcaacc aacccttgca gaagaaatgg gtgtattaca agaacgtatt 780
acctcaacta aaactgggtc aatcacggca gta
813

```

<210> 308
 <211> 826
 <212> DNA
 <213> *Haemophilus haemolyticus* ATCC 33390

```

<400> 308
tgaatttcca caagatgcag tgccaaaagt ttacgatgca ttaaaaagttg aatcagggttt 60
aacacttgag gtgcaacaac aattaggtgg cgggtgtggt cgttgtatcg cattaggtgc 120
ttctgacggg ttaaaacgtg gttttaaagt agaaaacacg aatgatccga ttcaagtacc 180
ggtaggcaca aaaacccttg gtcgtatcat gaatgtattg ggtgaaccaa ttgacgaaca 240
agggtccaat ggtgaagaag agcgttgggc tatccatcgt tctgcaccaa gctatgaaga 300
acaatcaaac agtacggaat tattagagac ttggtatcaaa gttatcgact taatttgtcc 360
attcgcaaaa ggtgggtaaa ttggtctatt cgggtgtgcg ggtgtaggta aaaccgttaa 420
catgatggaa ttaatccgta acatcgcgat cgagcactca ggttactccg tatttgcggg 480
tgtagggtgaa cgtactcgtg aaggtaacga cttctatcat gaaatgaaag attctaactg 540
attagataaa gtatcttttg tttatgggtc gatgaatgag ccaccaggta accgtttacg 600
tggtgcgtta actgggttaa ccatggcaga aaaattccgc gatgaagggtc gtgatgtatt 660
attcttcgtg gataatatct atcgtttata ccttgctggg acggaagtat ctgctgtatt 720
agggtcgtat ccatctgcgg taggttacca accaactctt gctgaagaaa tgggtgtgtt 780
acaagaacgt atcacttcaa ccaaacaggt ttctattaca tctgta
826

```

<210> 309
 <211> 809
 <212> DNA
 <213> *Haemophilus parahaemolyticus* ATCC 10014

```

<400> 309
gatgcagtac caaaagtata tgatgcgtta aaagttgaat caggtttaac gcttgaagtt 60
caacaacaat taggcgggtg cttagtgcgc tgtatcgcat taggtacgtc tgatgggtta 120
aaacgtgggt taaaagttag aaatacaggc aaccaattg aagtgccagt gggcactaaa 180
acccttgggt gtattatgaa cgtattgggt gagccgattg acgaaaaagg tcctatcggt 240
gaagaagcac gctgggcaat ccaccgtgca gcaccaagct acgaagagca atcaaatagc 300

```

acggaattac	tcgaaacagg	tatcaaagtt	atcgacttaa	tctgcccatt	cgcaaaaggg	360
ggtaaagttg	gtttattttg	tggtgcaggt	gtaggtaaaa	ccgtaaatat	gatggagtta	420
atccgtaaca	tcgcgatcga	acactctggt	tactctgtat	ttgcaggggt	aggtgagcgt	480
actcgtgaag	gtaatgactt	ctaccacgaa	atgacagact	ctaacgtatt	agataaagta	540
tcgttagtgt	atggtcaaatt	gaacgaacca	ccaggtaacc	gtttacgcgt	agctttaaca	600
ggcttaacca	tggcggaaaa	attccgcgat	gaaggctcgtg	acgtattatt	cttcgtcgat	660
aacatctacc	gttataccct	agcaggtacg	gaagtgtcag	cacttctcgg	tcgtatgcca	720
tctgcggtag	gttatcagcc	aaccttagca	gaagaaatgg	gtgtattaca	agagcgtatc	780
acttcaacca	aaactgggtc	tatcacctc				809

<210> 310
<211> 824
<212> DNA
<213> *Haemophilus parainfluenzae* ATCC 7901

<400> 310						
cgaatttcca	caagatgcag	tacccaaaagt	ttatgatgca	ttaaaagttg	aatcggggttt	60
aacccttgaa	gttcaacaac	aattaggtgg	tggtgtggta	cgttgatcgc	cactggggagc	120
ttctgacggt	ttaaaacgca	gtttaagcgt	tgaaaatacc	aataaaccac	tttcagtacc	180
ggttgggtgta	aaaactctcg	gtcgtattat	gaacgtattg	ggcgaaccga	ttgatgaaag	240
aggtcctatc	ggtgcggaag	aagaatgggc	aattcaccgt	tctactccaa	gttatgaaga	300
acagtccaac	agtaccgaat	tattagaaac	cgggtatcaaa	gttatcgact	taatttgtcc	360
attcgcggaag	ggtggtaaag	ttgggtttatt	cgggtgggtgcg	ggtgtaggta	agaccgtaaa	420
tatgatggaa	ttaatccgta	atattgcgat	tgagcactca	ggttactccg	tatttgccgg	480
tgtagggtgag	cgtacccgtg	aaggtaacga	cttctaccat	gaaatgacag	aatctaacgt	540
attagacaaa	gtatccctag	tttacggaca	aatgaatgag	ccgccgggta	accgtttacg	600
tgttgcttta	accgggtttaa	ccatggcgaga	aaaattccgt	gacgaagggtc	gtgatgtatt	660
attcttcgtg	gataacatct	atcgttatac	ccttgcaggg	actgaagtat	cggcactttt	720
aggcgtatg	ccatcagcgg	taggttatca	gccgacactt	gcagaagaaa	tgggtgtgtt	780
acaagaacgt	attacatcaa	ccaaaacagg	ttctattact	tctg		824

<210> 311
<211> 811
<212> DNA
<213> *Hafnia alvei* ATCC 13337

<400> 311						
gccgtgccta	aagtgtataa	cgcacttgag	gtgaaaggcg	gtgccactaa	actgggtactg	60
gaagttcagc	agcagctagg	cggcggcggt	gtacgctgta	tcgctatggg	tacttctgac	120
ggtctgcgtc	gcggactgga	cgttggtgac	ctggagcacc	cgattgaagt	cccagtaggt	180
aaagcgacct	taggccgcat	tatgaacgta	ctgggtgagc	caattgatat	gaagggtgat	240
atcggcgaag	aagatcgctg	ggctattcac	cgtgaagctc	caagctacga	agaactgtct	300
aactcgcaag	aactgctgga	aactggtatc	aaggtaatgg	acctgatttg	tccgttcgct	360
aagggcggta	aagttggtct	gttcggtggt	gcgggtgttg	gtaaaacagt	aaacatgatg	420
gagctgatcc	gtaacatcgc	gatcgagcac	tcaggttact	ctgtattttgc	cggcgtgggt	480
gaacgtactc	gtgagggtaa	cgacttctac	cacgaaatga	ccgactccaa	cgtattggac	540
aaagtatcac	tggtttatgg	ccagatgaac	gagccaccag	gaaaccgtct	gcgcgttgcg	600
ctgaccggtc	tgactatggc	tgagaagttc	cgtgacgaag	gtcgtgacgt	actgctgttc	660
atcgataaca	tctaccgtta	taccctggcc	ggtaccgaag	tatctgcact	gttgggtcgt	720
atgccttctg	cggtaggtta	tcagccaacg	ctggcggaag	agatgggtgt	tctgcaagaa	780
cgtatcacct	cgacccaaaac	gggttcaatc	a			811

<210> 312
<211> 831
<212> DNA
<213> *Kingella kingae* ATCC 23330

<400> 312						
gcgatgctat	tccacgcggt	tacgatgcgt	tgaaactggg	tgatgtggac	ttgacattag	60
aagtgcaaca	acaactgggc	gatggcgtag	tgcgtaacct	tgcgatgggt	agtaccgatg	120
gtttgaaacg	cggcttagcc	gtgaacaaca	caggcgccacc	tattacagtg	cctgttggtta	180
aagcaacatt	gggtcgtatt	atggacgtat	tgggtaatcc	tgttgatgaa	gcaggtccaa	240
ttggttctga	ccaaacgcgt	gctattcacc	aaccagctcc	taaatttgat	gaactgtcta	300

```
gcgcaaccga attgctggaa acaggcatca aagtgattga cttgctttgc ccatttgcaa 360
aagggtggtaa agtaggtttg tttgggtggg cagggtgtggg caaaactgtg aacatgatgg 420
agttgattaa caacattgcc aaagcgcaca gtgggtttgtc tgtatttgca ggcgtgggtg 480
aacgtactcg cgaaggtaat gacttctatc acgagatgaa agatttctaac gtgttgata 540
aagttgccat ggtgtatggt caaatgaatg aacctcctgg caaccgtttg cgcgttgcat 600
tgactggttt gtctatggca gaacacttcc gtgatgaaaa agacgaaaat ggcaaaggtc 660
gcgatgtatt gttctttgtg gacaacatct atcgctacac attggcaggt acagaagtat 720
cggcattgct gggtcgtatg ccctctgcgg taggttatca accaacattg gcagaagaaa 780
tgggtcggtt gcaagagcgt attacttcaa cgcaaacagg ttcgattact t 831
```

<210> 313
<211> 812
<212> DNA
<213> *Klebsiella pneumoniae* subsp. *ozaenae* ATCC 11296

```
<400> 313
atgccgtacc acgcgtgtac gaagcccttg aggtacagaa tggtaatgaa gttctgggtgc 60
tggaagttca gcagcagctg ggcggcggtg tcgtacgtac catcgccatg ggttcttctg 120
atggtctgcg ccgcggtctg gatgtaaaag acctcgagca cccgatcgaa gtcccggtag 180
gtaaagcaac gctgggtcgt atcatgaacg tactgggtca accggttgac atgaaaggcg 240
acatcggcga agaagagcgt tgggctatcc accgcgcggc accgtcctat gaagagctgt 300
ccagctctca ggaactgctg gaaaccggca tcaaagttat cgacctgatg tgtccgttcg 360
ccaagggcgg taaagttggt ctgttcggcg gtgcgggtgt aggtaaaact gtaaaccatga 420
tggagctgat ccgtaacatc gcgatcgagc actccggtta ctctgtgttt gcgggcgtag 480
gtgagcgtac tcgtgagggg aacgacttct accacgaaat gaccgactcc aacgttatcg 540
ataaagtatc cctggtgtac ggccagatga acgagccgcc gggaaaccgt ctgcgcgttg 600
cgctgaccgg cctgaccatg gctgagaaat tccgtgacga aggtcgtgac gtactgctgt 660
tcgtcgataa catctatcgt tacaccctgg ccggtactga agtatccgcg ctgctgggtc 720
gtatgccttc agcggtaggt tatcagccga cctggcgga agagatgggc gttctgcagg 780
aacgtatcac ctccaccaa accggttcta tc 812
```

<210> 314
<211> 812
<212> DNA
<213> *Klebsiella ornithinolytica* ATCC 31898

```
<400> 314
atgccgtacc gcgcgtgtac gatgctcttg aggtacagaa tggtaatgag agcctgggtgc 60
tggaagttca gcagcagctc ggcgggtggt tcgtacgtgc tatcgccatg ggttcttccg 120
acggtctgcg tcgtgggtctg gaagttaaaag acctgagca cccgatcgaa gtcccgggtg 180
gtaaagcaac gctgggtcgt atcatgaacg tgctgggtca gccaatcgat atgaaaggcg 240
acatcggcga agaagagcgt tgggctattc accgtgcagc tccgtcctat gaagagctgt 300
ccagctctca ggaactgctg gaaaccggca tcaaagttat cgacctgatg tgtccgttcg 360
ctaagggcgg taaagttggt ctgttcgggt gtgcgggtgt aggtaaaacc gtaaaccatga 420
tggagctgat ccgtaacatc gcgatcgagc actccggtta ctccgtgttt gcgggcgtag 480
gtgaacgtac tcgtgagggg aacgacttct accacgaaat gaccgactcc aacgttctgg 540
ataaagtatc cctgggttat ggccagatga acgagccgcc gggaaaccgt ctgcgcgttg 600
ctctgaccgg cctgaccatg gctgagaaat tccgtgacga aggtcgtgac gttctgctgt 660
tcgtcgataa catctatcgt tataccctgg ccggtactga agtatccgca ctgctgggtc 720
gtatgccttc agcggtaggt tatcagccga cctggcgga agagatgggt gttctgcagg 780
aacgtatcac ctccaccaa accggttcta tc 812
```

<210> 315
<211> 813
<212> DNA
<213> *Klebsiella oxytoca* ATCC 33496

```
<400> 315
gtaccgcgcg tgtacgaggc tcttgaggtg caaaatggta gtgagaatct ggtgctggaa 60
gttcagcagc agctcggcgg cgggtattgtt cgtaccatcg ccatgggttc ttccgacggt 120
ctgcgtcgcg gtctgggaagt caaagacctc gagcatccga tcgaagtccc ggtaggtaaa 180
gcaacgctgg gtcgatatcat gaacgtactg ggccaaccgg tagacatgaa aggcgacatc 240
ggcgaagaag agcgttgggc gattcaccgc gcagcgcctt cctacgaaga gttgtcaaac 300
```

tctcaggaac	tgctggaaac	cggcatcaaa	gttatcgacc	tgatgtgtcc	gtttgcgaag	360
ggcggtaaag	ttgggtctgt	cgggtggtgcg	ggtgtaggta	aaaccgtaaa	catgatggag	420
ctgatccgta	acatcgcgat	cgagcactcc	ggttactccg	tgtttgccgg	cgtaggtgaa	480
cgtactcgtg	agggtaacga	cttctaccac	gaaatgaccg	actccaacgt	tatcgataaa	540
gtatccctgg	tgtatggcca	gatgaacgag	ccgccgggaa	accgtctgcg	cgttgccgtg	600
accggcctga	ccatggctga	gaagttccgt	gacgaaggtc	gtgacgttct	gctgttcgtc	660
gataacatct	atcgttacac	cctggccggg	actgaagtat	ccgcactgct	gggtcgtatg	720
ccttcagcgg	taggttacca	gccgactctg	gcggaagaga	tgggcgttct	gcaggaacgt	780
atcacctcca	ccaaaacggg	ttctatcact	tcc			813

<210> 316
 <211> 822
 <212> DNA
 <213> *Klebsiella planticola* ATCC 33531

<400> 316						
gatgccgtac	cgcgcgtgta	cgatgctctt	gaggtacaga	atggtaatga	gagcctgggtg	60
ctggaagttc	agcagcagct	cggcgggtgg	atcgtagctg	ctatcgccat	gggttcttct	120
gacggtctgc	gtcgtgggtc	ggaagttaaa	gaccttgagc	acccgatcga	agtcccgggt	180
ggtaaagcaa	cgtcgggtcg	tatcatgaac	gtgctgggtc	agccgatcga	tatgaaaggg	240
gacatcggcg	aagaagagcg	ttgggctatt	caccgcgcag	ctccgtctta	tgaagagctg	300
tccagttctc	aggaactgct	ggaaaccggc	atcaaagtta	tcgacctgat	gtgtccggtc	360
gctaagggcg	gtaaagtagg	tctgttcggg	ggtgcggggc	taggtaaaac	cgtaaacaatg	420
atggagctga	tccgtaacat	cgcgatcgag	cactccgggt	actccgtggt	tgccggcgctc	480
ggtgaacgta	ctcgtgaggg	taacgacttc	taccacgaaa	tgaccgactc	caacgttctg	540
gataaagtat	ccctggttta	tggccagatg	aacgagccgc	cgggaaaccg	tctgcgcggt	600
gctctgaccg	gcctgaccat	ggctgagaaa	ttccgtgacg	aaggctcgtg	cgttctgctg	660
ttcgtcgata	acatctatcg	ttataccctg	gccggtactg	aagtatccgc	actgctgggt	720
cgtatgcctt	cagcggtagg	ttatcagccg	accctggcgg	aagagatggg	tgttctgcag	780
gaacgtatca	cctccaccaa	aaccgggttct	atcacttccg	ta		822

<210> 317
 <211> 785
 <212> DNA
 <213> *Klebsiella pneumoniae* subsp. *pneumoniae* ATCC 13883

<400> 317						
agaatggtaa	tgaagttctg	gtgctggaa	ttcagcagca	gctggggcggc	ggatatcgta	60
gtaccatcgc	catgggttct	tctgatggtc	tgccgccggg	tctggatgta	aaagacctcg	120
agcaccgat	cgaagtcccg	gtaggtaaa	caacgctggg	tcgtatcatg	aacgtactgg	180
gtcaaccggg	tgacatgaaa	ggcgacatcg	gcgaagaaga	gcgttgggct	atccaccggc	240
cggcaccgct	ctatgaagag	ctgtccagct	ctcaggaaact	gctggaaaacc	ggcatcaaa	300
ttatcgacct	gatgtgtccg	ttcgccaagg	gcggtaaaagt	tggtctgttc	ggcgggtgcg	360
gtgtaggtaa	aactgtaaac	atgatggagc	tgatccgtaa	catcgcgatc	gagcactccg	420
gttactctgt	gtttgcgggc	gtaggtgagc	gtactcgtga	gggtaatgac	ttctaccacg	480
aaatgaccga	ctccaacgtt	atcgataaa	tatccctggg	gtacggccag	atgaacgagc	540
cgccgggaaa	ccgtctgcgc	gttgcgctga	ccggcctgac	catggctgag	aaattccgtg	600
acgaaggctg	tgacgtactg	ctgttcgtcg	ataacatcta	tcgttacacc	ctggccggta	660
ctgaagtatc	cgcactgctg	ggtcgtatgc	cttcagcggg	aggttatcag	ccgaccctgg	720
cggaagagat	gggcgttctg	caggaacgta	tcacctccac	caaaaccggg	tctatcacct	780
ccgta						785

<210> 318
 <211> 759
 <212> DNA
 <213> *Kluyvera ascorbata* ATCC 33433

<400> 318						
ctggtgctgg	aagttcagca	gcagctcggc	ggcgggtatcg	tacgtwccat	cgctatgggt	60
tcttccgacg	gtctgcgtcg	cggctctggat	gttaaagatc	tcgagcacc	aatcgaagtt	120
ccggtmgtga	aagcaacmct	gggtcgtatc	atgaacgtac	tgggtcakcc	agtmgacatg	180
aaaggcgaca	tcgggtgaaga	agagcgttgg	gctatccacc	gcgctgcacc	ttcctacgaa	240
gagctgtcta	gctctcagga	attgctggaa	accgggtatca	aagttatcga	cctgatgtgt	300

ccgttcgcta	agggcggttaa	agtcgggtctg	ttcgggtggtg	csggtgttgg	taaaaccgta	360
aacatgatgg	agctgatccg	taacatcgcg	atcgagcact	cgggttactc	cgtgtttgcg	420
ggcgtaggtg	aacgtactcg	tgagggtaac	gacttctacc	acgaaatgac	cgactccaac	480
gttatcgata	aagtatccct	ggtatatggc	cagatgaacg	agccaccggg	aaaccgtctg	540
cgcgttgctc	tgaccgggtct	gacctgggtc	gagaaattcc	gtgacgaagg	tcgtgacgta	600
ctgctgttgc	tcgataacat	ctatcgttac	accctggccg	gtactgaagt	atctgcwctg	660
ctgggtcgta	tgcccttcagc	ggtaggttac	cagccgaccc	tggcggaaga	gatgggcgtt	720
ctgcaggaac	gtatcacctc	caccaagacc	ggttctatc			759

<210> 319
 <211> 831
 <212> DNA
 <213> *Kluyvera cryocrescens* ATCC 33435

<400> 319						
ttccctcagg	atgccgtacc	gcgtgtgtac	gaagcccttg	agggttcagaa	tggtaatgaa	60
gtgctggtgc	tggaagttca	gcagcagctc	ggcggcggta	tcgtacgtac	catcgctatg	120
ggttcttccg	acggctctcg	tcgtgggtctg	gatgtaaaag	acctcgagca	cccgatcgaa	180
gtccccgtag	gtaaagcaac	actgggtcgt	atcatgaacg	tactgggcca	accggtagac	240
atgaaaaggcg	acatcggtga	agaagaacgt	tgggctatcc	accgtgcagc	accttcttac	300
gaagagctgt	caagctctca	ggaactgctg	gaaaccggca	tcaaagttat	cgacctgatg	360
tgtccgtttg	cgaagggcgg	taaagttggt	ctgttcgggtg	gtgcgggtgt	aggtaaaacc	420
gtaaacatga	tggagcttat	tcgtaacatc	gcgattgagc	actccgggta	ttctgtgttt	480
gcgggcgtag	gtgaacgtac	tcgtgagggt	aacgacttct	accacgaaat	gaccgactcc	540
aacgttatcg	ataaagtttc	cctgggtttac	ggccagatga	acgagccacc	aggaaaccgt	600
ctgcgcgttg	cgctgactgg	tctgactatg	gctgagaagt	tccgtgacga	aggctcgcgac	660
gtactgctgt	tcgtcgataa	catctatcgt	tacaccctgg	ccggtacaga	agtatctgca	720
ctgctgggtc	gtatgccttc	agcggtaggt	taccagccga	ctctggcgga	agagatgggc	780
gttctgcagg	aacgtatcac	ctccaccaa	accggttcta	tcacctccgt	a	831

<210> 320
 <211> 810
 <212> DNA
 <213> *Kluyvera georgiana* ATCC 51603

<400> 320						
gccgtaccgc	gcgtgtacga	agcccttgag	gtacagaatg	gtaatgaagt	gctgggtgctg	60
gaagttcagc	agcagctcgg	tggcgggtatc	gtgcgtacca	tcgccatggg	ttcctccgac	120
ggtctgcgtc	gcgggtctgga	agttaaagat	ctcgagcacc	cgatcgaagt	tccggtaggt	180
aaagcaacac	tgggtcgtat	catgaacgta	ctgggtcacc	cggtagacat	gaaaggcgac	240
atcgggtgaag	aagagcggtg	ggctatccac	cgcgctgcgc	cttcctacga	agagctgtcc	300
agctctcagg	aactgctgga	aaccgggtatc	aaagttatcg	acctgatgtg	tccgttcgcg	360
aaggcgcgta	aagtcgggtc	gttcggcggt	gcgggtgttg	gtaaaaccgt	aaacatgatg	420
gagctgatcc	gtaacatcgc	gatcgagcac	tccggttact	ctgtgtttgc	gggcgtaggt	480
gaacgtactc	gtgagggtaa	cgacttctac	cacgaaatga	ccgactccaa	cgttatcgat	540
aaagtatccc	tggtgtatgg	ccagatgaac	gagccgcggg	gaaaccgtct	gcgcgttgcg	600
ctgaccggcc	tgaccatggc	tgagaaattc	cgtgacgaag	gtcgtgacgt	actgctgttc	660
gtcgataaca	tctatcggtt	caccctggcc	ggtagtgaag	tatctgcact	gctgggtcgt	720
atgccttcag	cggtaggtta	ccagccgact	ctggcggaag	agatgggcgt	tctgcaggaa	780
cgtatcacct	ccaccaagac	cggttctatc				810

<210> 321
 <211> 834
 <212> DNA
 <213> *Lactobacillus acidophilus* ATCC 4356

<400> 321						
tcgataagaa	tttacctgat	attaacaacg	ccttacgtgt	aatcaagtcc	gaagatgaaa	60
gcacgtttct	tgaagttaca	cttgaactcg	gtgatgggtg	tttaagaaca	atcgccatgg	120
aatctaccga	tggctcttcg	cgtgggtatga	aagtcgaaga	tactggcgct	ccaatttcag	180
ttccagtttg	agaagacact	ttaggtcgtg	tgtttaacgt	tttaggacag	cctattgatg	240
gtgggtccagc	ctttccaaag	gatcaccac	gtgagggtat	ccacaaggaa	gcacctaaat	300
atgaagattt	aactactagt	cgtgaaatcc	ttgaaactgg	tatcaaggtt	atcgaccttc	360

ttgaaccata	tggtcgtggt	ggtaaagttg	gtttgtttgg	tggtgccggt	gttggtaaaa	420
ctactattat	tcaagaatta	attcacaaca	tcgctcaaga	acacggtggt	atttccgatat	480
ttactggtgt	tggtgaaaga	actcgtgaag	gtaatgacct	ttactttgaa	atgaaagcct	540
caggcggtttt	aagtaagact	gccatggtat	ttggtcagat	gaacgagccg	cctggtgcca	600
gaatgcgtgt	tgcattaacc	ggtttgacac	ttgctgaata	ctttagagat	gttgaaggtc	660
aagacgtatt	gctctttatt	gacaatatct	ttagatttac	tcaggctggt	tcagagggat	720
ctgctttgct	tggtcgtatg	ccaagtgcgc	taggttatca	gccaactttg	gcaacagaaa	780
tgggtcaatt	gcaggaaaga	attacttcta	ctaagaaggg	ttcaattact	tcaa	834

<210> 322

<211> 824

<212> DNA

<213> *Legionella pneumophila* subsp. *pneumophila* ATCC 33152

<400> 322

ttcctcgtga	tagcgtgcct	aaagtcaatg	atgcgttaaa	gcttggtgat	agtgatctgg	60
tttttgaagt	gcagcagcaa	cttggagacg	gagttgtgcg	tactattgcc	atgggaacaa	120
ccgatggttt	aaagcgagga	ttaaaagcag	aaaatacagg	ccatcctatt	caagtgccag	180
taggtaagaa	aactttggga	cgcattatgg	atgttcttgg	gcgtcctgta	gatgatgctg	240
ggcctatcga	tgctgaagag	acttgggcta	ttcatcgtaa	agcaccaagt	tatgaagagc	300
aagctggcag	ccaggaatta	ttggaaactg	gtattaaagt	aattgatttg	ctttgccctt	360
ttgccaaggg	aggtaaagtt	ggtctattcg	gtggtgccgg	tgtaggcaaa	accgttaaca	420
tgatggaatt	aatacgaaac	attgcaattg	agcatagcgg	ttattcagtg	tttgcagggg	480
ttggtgaacg	taccctgtga	ggaaacgact	tctatcatga	gatgaaagac	tctaattgat	540
tggataaagt	atcgcttggt	tatggtcaga	tgaatgagcc	gccaggaaac	cgtttgctgt	600
ttgctctaac	cggtttgact	atggctgaaa	aattccggga	tgaagggcga	gacgttcttt	660
tgtttatcga	taatatattat	cgttatacct	tggtcggggt	tgaagtatct	gcgctgttag	720
gccgtatgcc	ttctgcagta	ggatatcagc	cgacattagc	agaggaaatg	ggtatgctgc	780
aagagcgcac	tacctccaca	aaaacaggtt	ctattacttc	cata		824

<210> 323

<211> 818

<212> DNA

<213> *Leminorella grimontii* ATCC 33999

<400> 323

gacgccgtac	cgaaagtgtg	cgatgcgctt	gaagttcaaa	ttgatgccaa	gctgggttctg	60
gaagttcaac	agcagctcgg	cggcggcgtt	gttcgctgca	tcgcgatggg	tacttcagac	120
ggcttaagcc	gcggtctgga	cgtgctcgat	ctggaacacc	cgattgaagt	accggtgggc	180
aaagcgacgc	tggggccgcat	catgaacgtg	cttgggtcacc	ctatcgacat	gaagggcgac	240
atcgggcgaag	aagagcggtg	ggctattcac	cgcgcagcgc	cgagctacga	agacctgtcg	300
ggcgcaaccg	agctgctgga	gaccggcatc	aagggttatcg	acctgatttg	tccgttcgcc	360
aagggcggtg	aagtcggcct	gttcggcgcc	gccggcgtag	gtaaaaccgt	aaacatgatg	420
gagctcattc	gcaacattgc	gaccgagcac	tccggttact	ccgtgtttgc	aggcgtaggt	480
gaacgtaccc	gtgagggtaa	cgacttctac	cacgaaatga	ctgaatccaa	cgtattggac	540
aaggtgtcgc	tggtatacgg	tcagatgaac	gagccgcctg	gaaaccgtct	gcgcgtagcg	600
ttaacgggct	tgaccatggc	ggagaagttc	cgtgatgaag	gccgtgacgt	tctgctgttt	660
atcgacaaca	tttaccgcta	tacctggcc	ggtacggaag	tatccgcact	gctggggcgt	720
atgccttcag	ccgtaggcta	ccagccgact	ctggctgagg	aaatgggcgt	gcttcaagag	780
cgtattacct	ctaccaagac	ggggtctatc	acctccgt			818

<210> 324

<211> 835

<212> DNA

<213> *Listeria monocytogenes*

<400> 324

gtggaaactt	acctgaaatc	tacaatgccc	tagttattga	atataaatct	gatgcagaag	60
aagcaccaac	tagccaactt	actttagaag	tagccatcca	attaggtgat	gatgttgtac	120
gtacaatcgc	aatggcatca	acagatgggt	ttcaaagagg	tatggaagtt	attgatactg	180
ggagcccaat	tacagttcct	gtaggtacag	taactcttgg	tcgtgtatct	aatgtattag	240
gaaacacccat	cgatttggac	gaaccacttc	caagcgatat	taaacgtaat	aaaattcacc	300
gcgaagctcc	aactttcgat	caattagcaa	cgacaacaga	aattcttgaa	acaggaatta	360

aagtagttga	cttgctagct	ccttacttaa	aaggtggtaa	aatcggattg	ttcgggtggtg	420
ccggtggttg	taaaaccgtt	ctaattcaag	agcttatcca	taatatcgca	caagaacatg	480
gtggtatttc	tgtgttcgct	ggcgttggag	aacgtactcg	tgaaggtaac	gacctttact	540
tcgaaatgaa	agattcaggc	gttattgaaa	aaacagcgat	ggtattcggg	caaatagaac	600
agccaccagg	tgcgcgtatg	cgtgttgcc	taactgggtc	aacaattgct	gaatatttcc	660
gtgatgaaga	acatcaagat	gtacttttat	tcattgataa	cattttccgt	ttcacacaag	720
ctgggttcaga	ggtttcggct	ttactaggtc	gtatgccatc	tgcggtaggt	taccaaccaa	780
ccctagctac	tgaaatgggt	caactacaag	aacgtattac	atctactaac	gttgg	835

<210> 325
 <211> 828
 <212> DNA
 <213> *Micrococcus lylae* ATCC 27566

cccgcgtggc	gagttgccgg	cactgttcaa	cgcgctgact	gtcagaggtca	ccctcgaagc	60
agtcgctaaa	accattaccc	ttgaggttgc	tcagcacctc	ggcgacaact	tggttcgtgc	120
cgtgtccatg	gcaccgaccg	acgggtctcg	ccgtggcgct	gctgtgatcg	acagcggtaa	180
gccgatctca	gttcccgttg	gtgacgtagt	caagggacac	gtcttcaacg	ctctgggtga	240
ttgcctcgat	gagccaggtc	ttggccgtga	cggtagagcag	tggggcatcc	accgcgatcc	300
gccacctttt	gaccagcttg	agggtaagac	cgagattctg	gaaaccggta	ttaagggtcat	360
cgacctgctg	accccgatg	ttaagggcgg	caagatcggc	ctgttcgggtg	gtgctgggtg	420
gggtaagacc	gttcttatcc	aggaaatgat	cacccgtatc	gctcgcgagt	tctccggtac	480
ctcgggtgttc	gcaggcgtgg	gtgagcgtac	ccgtgagggc	accgacctct	tcctgggaaat	540
gggaagagatg	ggcggttctcc	aggacaccgc	tcttgtgttc	ggccagatgg	acgagcctcc	600
aggagttcgt	atgcgcgtgg	cgtgtccgg	cctgaccatg	gcggagtagt	tccgcgatgt	660
gcagcaccag	gacgtgcttc	tgttcacatga	caacatcttc	cgtttcaccc	aggcaggttc	720
cgagggtttcc	accctcctag	gccgcgatgc	ttctgccgtg	ggttaccagc	caacgctggc	780
agacgagatg	ggtgttctgc	aggagcgtat	tacctccaca	aagggtaa		828

<210> 326
 <211> 822
 <212> DNA
 <213> *Moellerella wisconsensis* ATCC 35017

gatgccgtac	caaaagtgtg	cgatgctctt	gaggttctta	acggtaaaga	aaaattgggtg	60
ctggaagtgc	agcaacaatt	aggcgggtgt	gttggttcgtt	gtatcgcaat	gggtacatca	120
gatggtttta	gccgcggttt	agaagttaa	aatacagatc	atccgatcga	agttcctgtc	180
ggtgttaaaa	cgcttggccg	tatcatgaac	gtgctgggtg	acccaatcga	catgaaaggt	240
gatatcgccg	aagaagaacg	ctggtcaatt	caccgcgcag	caccaagcta	tgaagatctg	300
gctaactcaa	cagaacttct	agaaacaggt	atcaaagtta	tggacctgat	ttgcccattc	360
gctaaagggg	gtaaagtggg	tctgttcggg	ggtgcgggtg	tcggtaaaac	agttaacatg	420
atggagctta	ttcgtaatat	cgcgattgag	cactcagggt	attctgtatt	cgcggtgtgt	480
ggtgaacgta	ctcgtgaagg	taacgatttc	taccatgaaa	tgacagactc	aaacgttctg	540
gataaagttt	cattgggttt	tggccagatg	aatgagccac	caggaaaccg	tctgcgtgtt	600
gctctgactg	gtctgactat	ggcagagaaa	ttccgtgacg	aaggctcgta	cgtactgtta	660
ttcgtagata	atatattatc	ttatacctta	gcagggacag	aagtatctgc	actgctgggt	720
cgtatgcctt	cagcgggtgg	ttatcagcca	acgctggcgg	aagagatggg	tgttctgcaa	780
gaacgtatca	cctcgactaa	gaccggctct	atcacttccg	ta		822

<210> 327
 <211> 854
 <212> DNA
 <213> *Branhamella catarrhalis* ATCC 43628

ccgtggcgat	gtcccccaaa	tctttgatgc	acttcatggt	gatggtagctg	aaaccaccct	60
tgaagtccaa	caacagttag	gtgatgggtg	ggtgcgtacc	attgccatgg	gttctaccga	120
aggcttaaaag	cgtggccttg	ctgtctctaa	ttcaggtgca	cccatttcgg	taccagtcgg	180
tcaagcaaca	ctgggtcgca	ttatggatgt	cctaggtcgc	ccaatcgatg	aagcaggtcc	240
ggtaaatgct	gaacaaaaat	ggtccattca	tcgtgaagca	ccaagttagt	atgaacagtc	300
aaatagtaca	gaacttttag	aaacaggcat	caaagtgatt	gatttgcttt	gtccatttgc	360

caaaggtggt	aaagtcggtc	tggttcggtgg	tgctggtggt	ggtaagaccg	ttaacatgat	420
ggagcttata	aataatatcg	ccctaaaaaca	ctcaggtctg	tcgggtttttg	ctgggtgtggg	480
tgagcgtact	cgtgagggtg	atgactttcta	ccatgaaatg	caagaagcag	gcgttgttaa	540
taccgaagat	tttactcagt	caaaaagttgc	catgggtttat	ggtcagatga	atgagccacc	600
aggaaaccgt	ctgctgtgtg	ccttaactgg	tttgaccatg	gcagagtatt	tccgtgatga	660
aaaagacgaa	gcaacgggca	aaggccgtga	tggtctgctg	ttcgttgata	atatttatcg	720
ttacacattg	gcaggtactg	aggtatcagc	acttttaggt	cgtatgccat	ctgcggtagg	780
ttatcagccg	actttggccg	aagagatggg	cttgctacaa	gagcgtatca	cctccacca	840
atcaggctca	atta					854

<210> 328

<211> 831

<212> DNA

<213> *Moraxella osloensis* ATCC 19976

<400> 328

ccgtcaaagc	gtaccaagaa	tttatgatgc	cttaaaagtt	gaaggcacag	aaactacatt	60
agaagtacaa	caacaattgg	gtgatgggtat	cgtacgtact	attgccatgg	gttctactga	120
aggctctaaa	cgtgggtctac	cagtttagcaa	cactggcgca	ccaatctctg	tacctgtggg	180
taaaggatca	ctaggtcgta	tcatggacgt	tttaggacac	ccaatcgatg	aggcagggtcc	240
ggtagagcat	agtaacactt	gggctgattca	ccgtgaagcg	ccaagctatg	atgaacaatc	300
aaactctact	gaacttttag	aaaccgggtat	taaagtaatt	gacttactat	gccccatttg	360
taaaggtggt	aaagtcggtc	tggttcggtgg	cgcggtgtgt	ggtaaaaccg	ttaacatgat	420
ggaacttata	aataacatcg	caaaagcaca	ctcaggttta	tcggtatttg	ctgggtgtagg	480
tgagcgtact	cgtgaaggta	atgactttcta	ccacgagatg	aaagactcaa	acgtacttga	540
taaagttgcg	atgggtgtatg	gtcagatgaa	tgagccacca	ggaaaccggt	tacgtgttgc	600
cctgacaggt	ttaacatgg	cagaatactt	ccgtgacgaa	aaagatgaaa	acggtaaagg	660
tcgtgacgta	ttattgttcg	ttgacaatat	ttatcggtac	acgctagcgg	gtaccgaagt	720
atcagcatta	ttaggtcgta	tgccatctgc	agtaggggtat	cagccaacgc	ttgcagaaga	780
gatgggtgta	ctacaagaac	gtattacttc	aacccaatca	ggctctatta	c	831

<210> 329

<211> 835

<212> DNA

<213> *Morganella morganii* subsp. *morganii* ATCC 25830

<400> 329

cgaatttccct	caggatgcag	taccgaaagt	gtacgatgcg	cttgaggtaa	caaatggtaa	60
agaaaaactg	gtgctggaag	ttcagcagca	gtaggcggc	ggggttggtc	gttgtatcgc	120
tatgggtaca	tctgatggtc	tgagccgtaa	tctggaagta	accgatctag	gccaccgat	180
cgaagtcctt	gtcggcgtag	aaaccttagg	acgtatcatg	aacgttctgg	gtgatccgat	240
cgatatgaaa	ggtagacatcg	gctcagaaga	aaaatgggtct	attcacccgtg	ctgcaccaac	300
atacgaagaa	ctgtctaact	cccaggaact	gctggaaaca	ggtagcaaaag	taattggacct	360
gatctgccc	ttcgcgaagg	gtggtaaagt	cggctctgttc	gggtggtgcgg	gtgtgggttaa	420
aaccgtaaac	atgatggaac	tgatccgtaa	catcgcgac	gagcactccg	gttactctgt	480
attcgcaggg	gtcgggtgagc	gtaccctgta	aggtaacgac	ttctatcatg	aaatgacaga	540
ctccaacggt	ctggacaaaag	tatcactcgt	gtacggccag	atgaacgagc	caccgggaaa	600
ccgtctgcgc	gttgctctga	ccggtctgac	catggcggaa	aaattccgtg	atgaaggccg	660
cgatgtactg	ctgttcggtt	ataacatcta	ccgttatacc	ctggccgggt	ctgaagtatc	720
cgcgctgtta	ggccgtatgc	cttcagcggg	aggttaccag	ccgacactgg	cggaagaaat	780
gggtgtgctt	caggaacgta	tcacatcgac	caaaacaggc	tctatcacgt	ctgta	835

<210> 330

<211> 824

<212> DNA

<213> *Pantoea agglomerans* ATCC 27155

<400> 330

gacgcggtac	cgcaagtgtg	cagcgccctc	gaggttatga	atgggtgatgc	gcgtctgggtg	60
ctggaagttc	agcagcagct	cggcgggcgg	gtagtacgta	ccatcgcaat	gggtacgtct	120
gacggcctga	agcgtggtct	gagcgtcaac	gactctgcga	aaccgattca	ggtagccgtc	180
ggtaacgaga	ccctgggccc	tatcatgaac	gttctcgccg	agccaatcga	tatgaaaggc	240
gagctgaaag	aagaagatgg	cagcgcgagta	gagatcgcc	ctattcaccg	cgcagcccct	300

tcttatgaag	atcagtctaa	ctcgcaggaa	ctgctggaaa	ccggcatcaa	ggttatcgac	360
ctgatgtgtc	cgtttgctaa	aggcggtaaa	gtcgggtctgt	tcggtggtgc	gggtgtaggt	420
aaaaccgtca	acatgatgga	actgatccgt	aacatcgcg	ctgaacactc	aggttactca	480
gtgtttgccg	gtgtgggtga	gcgtactcgt	gagggtaacg	acttctacca	cgaaatgact	540
gactctaacg	ttatcgataa	agttgcactg	gtctatggcc	agatgaacga	gccgccgggt	600
aaccgtctgc	gcgtagcact	gaccggtctg	accatggcgg	aaaaattccg	tgatgaaggt	660
cgcgacgttc	tgctgttcac	cgataacatc	taccgttata	ccctggccgg	tacagaagtt	720
tctgcactgc	tgggtcgtat	gccatctgcg	gtaggttacc	agccaacgct	ggcagaagag	780
atgggtgtgt	tgcaggagcg	tattacctcc	accaagaccg	gttc		824

<210> 331

<211> 808

<212> DNA

<213> *Pantoea dispersa* ATCC 14589

<400> 331

tatacagcgc	tctcgaggtg	aaaaatgggtg	atgctcgtct	ggtgctggaa	gtacagcagc	60
agctgggccc	tggcgtgggtg	cgtaccatcg	ccatgggttc	ttctgacggc	ctgaagcgcg	120
gtctggaagt	caccgacctg	aaaaaaccta	tccaggttcc	ggttggtaaa	gcaacactcg	180
gccgtatcat	gaacgtgctg	ggtgagccaa	tcgacatgaa	aggcgacctg	aaagaagaag	240
acggcagcgc	tgtagagggtt	tctctctatc	atcgcgccagc	gccttcttat	gaagatcagt	300
caaactcgca	ggaactgctg	gaaaccggca	tcaagggttat	cgacctgatg	tgcccggttcg	360
cgaagggcgg	taaagtccgtt	ctgttcgggtg	gtgcgggtgt	aggtaaaacc	gtaaacatga	420
tggagctgat	ccgtaacatc	gcggctgagc	actcaggtta	ttcggctctt	gccggcgtgg	480
gtgagcgtac	tcgtgagggt	aacgacttct	accacgaaat	gacggactcc	aacgttatcg	540
ataaagtagc	gctggtgtat	ggccagatga	acgagccgcc	gggtaaccgt	ctgcgcgtag	600
cactgaccgg	tctgacctatg	gcggaaaaat	tccgtgatga	aggccgtgac	gttctgctgt	660
tcatcgacaa	catctaccgt	tacaccctgg	ccggtacaga	ggtttctgca	ctgctgggtc	720
gtatgccatc	ggcggtaggt	tatcagccaa	cgctggctga	agagatgggt	gtgctgcagg	780
agcgtattac	ctccaccaag	accggttc				808

<210> 332

<211> 805

<212> DNA

<213> *Pasteurella multocida* NCTC 10322

<400> 332

gatgcagtac	caaaagtata	tgatgcctta	aatgttgaaa	caggtttagt	acttgaagtt	60
caacaacaat	taggtgggtg	tgtagttcgc	tgtatcgcaa	tgggatcatc	tgatggatta	120
aaacgcgggt	taagcgtaac	aaatacgaat	aaccacaatt	ctgttccagt	gggaacgaaa	180
acattgggtc	gtatcatgaa	cgtattgggt	gaaccaatcg	atgagcaagg	tgaaatcgg	240
gcagaagaga	attgggtctat	tcaccgtg	ccaccaagtt	atgaagaaca	atctaacagt	300
actgaacttt	tagaaaacggg	aattaaagtt	atcgacttag	tttgtccgtt	tgcgaaagg	360
ggtaaagtag	gtttattcgg	tggtgcgggt	gtcggtaaaa	ccgtcaatat	gatggaatta	420
atccgtaaca	tcgcaattga	gcactcaggt	tactctgtct	ttgcgggggt	aggtagcgt	480
acgcgtgaag	gtaacgactt	ctatcatgag	atgaaagact	ctaacgtatt	agataaagt	540
tctcttgttt	atgggtcaaat	gaacgagcca	ccaggtaacc	gtttacgtgt	ggcattaaca	600
ggcttaacta	tggcggaaaa	attccgtgat	gaaggtcgtg	atgtcttatt	cttcgttgat	660
aatattttatc	gtttatactct	tgctggtaca	gaagtttctg	cattattagg	tcgtatgcca	720
tctgcggtag	gttatcaacc	aacccttgca	gaagaaatgg	gtgttctgca	agagcgtatt	780
acctaacca	aaacagggttc	tatta				805

<210> 333

<211> 828

<212> DNA

<213> *Pragia fontium* ATCC 49100

<400> 333

tttctcctcaag	acgccgtacc	aaaagtgtac	gacgcgcttg	aagttcagaa	cgatgccaa	60
ctggtgctgg	aagttcaaca	acagctcgg	ggtggtgtcg	ttcgttggtat	cgcaatgggt	120
acttccgatg	gcttaagccg	cggtttaaaa	gtgcttgatt	tagaacatcc	tatcgaagta	180
ccggttggtg	ctgcgacgct	ggcgcgtatt	atgaacgtgc	tcggtcagcc	aatcgatatg	240
aaaggcgata	ttggtgaaga	agagcgttgg	gctattcacc	gtgaagcacc	aagttatgaa	300

gatttatctg	gcgccaatga	actgctggaa	acgggtatca	aggttatcga	cctgatttgt	360
ccgtttgcta	aagggtgtaa	agttggtctg	tttgggtggtg	cgggtgtagg	taaaaccgta	420
aacatgatgg	agctgattcg	taacattgcg	actgagcact	cagggttactc	cgtattcgcc	480
ggtgtagggg	aacgtacccg	tgaaggtaat	gacttctacc	acgaaatgac	cgaatcaaac	540
gtactggata	aagtatctct	ggtttatggc	cagatgaacg	agccaccagg	aaaccgtctg	600
cgcgtggcgt	taacgggttt	gaccatggct	gaaaaattcc	gtgatgaagg	tcgtgacgtt	660
ctgttattta	tcgataacat	ttatcgctat	accttagccg	gtaccgaagt	atcagcactg	720
ttggggcgta	tgccatcagc	ggtaggttat	cagccaacgt	tagcagaaga	gatgggtgtg	780
ttgcaggaac	gtattacttc	aacccaaaacc	ggttcaatca	cttctgta		828

<210> 334
 <211> 807
 <212> DNA
 <213> *Proteus mirabilis* ATCC 25933

<400> 334						
gtccctaaaag	tatacgacgc	tcttgagggtt	atgaatggta	aagaaaaact	ggtgctggaa	60
gttcagcaac	agttaggcgg	tggtatcggt	cgttgtatcg	caatgggtac	atcagacggt	120
ttaagccgtg	gcttaaaagg	tgaagattta	ggccacccaa	ttgaagtacc	agtaggtaaa	180
gcgacttttag	gacgtatcat	gaacgtttctg	ggtacaccta	ttgatatgaa	aggtagagatt	240
gaaaccgaag	agcgttggtc	aatccaccgt	gaagcaccaa	cttacgaaga	gttatcaaac	300
tctcaagaac	tgcttgaaac	cggtatcaaa	gttatggact	taatctgtcc	atttgctaaa	360
ggtggtaaaag	tcggctctgtt	cggtgggtgcg	ggtgttggtg	aaacagttaa	catgatggaa	420
ttgatccgta	atatcgcgat	cgagcactca	ggttactctg	tatttgctgg	tggtgggtgag	480
cgtactcgtg	agggtaacga	cttctatcat	gaaatgacag	attctaacgt	tcttgacaaa	540
gtatcgtttag	tttacgggtca	gatgaatgag	ccaccaggaa	accgtctgcg	tggtgactg	600
actggtctga	ctatgggtga	gaaattccgt	gatgaaggcc	gtgacgtact	gttattcgctc	660
gataacatct	atcggttacac	cttagccggt	acagaagtat	cagcactgtt	aggctgtatg	720
ccatcagcgg	taggttacca	accaacattg	gctgaagaga	tggtgtttct	gcaagagcgt	780
atcacttcaa	ccaaaacagg	ttctatc				807

<210> 335
 <211> 811
 <212> DNA
 <213> *Proteus vulgaris* ATCC 13315

<400> 335						
ccctaaagta	tacgacgctc	ttgagggttat	gaatggtaaa	gagaaactgg	tgctagaagt	60
tcagcaacag	ttaggcgggtg	gtatcggttcg	ttgtatcgca	atgggtacat	cagacgggtt	120
aagccgtggc	ttaaaagttg	aaaacttagg	ccaccaatt	gaagtaccag	taggtaaaagc	180
aacactggga	cgatatcatga	acgttcttggg	tacacctatc	gatatgaaag	gtgatattgc	240
aactgaagaa	cgttgggtcta	ttcaccgcga	agcgccaacc	tatgaagagt	tatcaagctc	300
tcaagaacta	ctagaaaccg	gtatcaaagt	aatggactta	atctgtccgt	ttgctaaaagg	360
tggtaaagta	ggtctcttcg	gtggtgcggg	tggtggtaaa	acagttaaca	tgatggaatt	420
gatccgtaac	atcgcgattg	agcactcagg	ttattctgta	tttgccagggtg	ttggtgagcg	480
tactcgtgag	ggtaacgact	tctatcatga	aatgacagat	tctaacgttc	ttgacaaaagt	540
atcgttagtt	tatgggtcaga	tgaatgagcc	accaggaaac	cgtctacgtg	tagcactgac	600
gggttttaacc	atggcgggaaa	aattccgtga	tgaaggccgt	gacgtactgt	tattcgctga	660
taacatctat	cgttacacct	tagccggtac	cgaagtatca	gcactgttag	gccgtatgcc	720
atcagcagta	ggttaccaac	caacattggc	tgaagagatg	ggtgtttctgc	aagaacgtat	780
cacttcaacc	aaaacagggt	caatcacctc	t			811

<210> 336
 <211> 806
 <212> DNA
 <213> *Providencia alcalifaciens* ATCC 9886

<400> 336						
tcaagataac	gtaccaaaaag	tgtacgatgc	tcttgagggtt	attaacggta	aagaaaaact	60
ggtgttgtaa	gttcaacaac	agttagggtg	tggtgttgtc	cgttgtatcg	caatgggtac	120
atcagatggg	ctgagccgtg	gtttagaagt	tgtaaaactta	gagcacccaa	tcgaagtacc	180
agtcggtaaa	gcaactctgg	gacgtatcat	gaacgtttctg	ggtgaaccaa	tcgacatgaa	240
agggtgatatc	ggcgaagaag	agcgtctggc	tattcacctg	gctgcaccaa	gctacgaaga	300

```

attagctaac tcaactgaac tgctggaaac cggtatcaaa gtaatggact taatctgtcc 360
attcgcgaaa ggtggtaaa taggtctgtt cgggtgtgctg ggtgttggtg aaaccgtaaa 420
catgatggaa ctgatccgta acatcgcgat tgagcactca ggttactcag tggtcgtggt 480
tggttggtgag cgtaccctgt aaggtaacga cttctatcat gaaatgacag actcaaactg 540
tctggataaa gtatcactgg tttatggcca gatgaacgag ccaccaggaa accgtctgctg 600
tggtgctgctg actggtctga ctatggctga aaaattccgt gacgaaggctc gtgacgtact 660
gctgttctgtt gacaacattt atcggttatac actggcagggt actgaagtat cagcactgtt 720
aggtcgtatg ccatcagcgg taggttacca accaacgctg gcggaagaga tgggtgttct 780
tcaagaacgt attacctcaa ctcaaa 806

```

<210> 337
 <211> 830
 <212> DNA
 <213> Providencia rettgeri ATCC 9250

```

<400> 337
ttccctcaag atgacgtacc aaaagtgtac gacgctcttg aggttggttaa cggtaaagaa 60
aactggtgct tggaagttca gcaacagtta ggcggtggtg ttgtccgttg tatcgcaatg 120
ggtacatcag atggcctgag ccgtgggtta gaagttgtaa acttagagca cccaattgaa 180
gtaccagtag gtaaagcaac tttaggacgt atcatgaacg ttctgggtca gcctattgat 240
atgaaaggtg atatcggcga agaagagcgc tgggtcaattc accgtgctgc acctagctac 300
gaagagttag ctaactcaac agagctgctg gaaaccggta tcaaagtaat ggacttaatc 360
tgtccattcg cgaaaggtgg taaagttggt ctgttcgggtg gtgcggtgtg ttgtaaaaaca 420
gtaaacatga tggaactgat ccgtaacatc gcgattgagc actcaggtta ctcagtattc 480
gctgggtgttg gtgagcgtac tcgtgaaggg aacgacttct atcatgaaat gactgactca 540
aacgttctgg ataaagtatc actgggttat ggccagatga atgagccacc aggaaaccgt 600
ctgctgcttg cgttgactgg tctgactatg gctgaaaaat tccgtgacga aggtcgtgac 660
gtactactgt tcgttgacaa catctatcgt tatacactgg caggtagtga agtatcagca 720
ctgttaggtc gtatgccttc agcggtaggt tatcagccaa cgctggcgga agagatgggt 780
gttctgcaag aacgtattac ctcaactcaa acgggttcta tcacttccgt 830

```

<210> 338
 <211> 812
 <212> DNA
 <213> Providencia rustigianii ATCC 33673

```

<400> 338
agcgtaccaa aagtgtacga tgctcttgag gttattaacg gtaaagaaaa actgggtgttg 60
gaagttcagc agcagttagg cggtggtgtt gtccgttgta tcgcaatggg tacatcagat 120
ggtctgagcc gtggtttaga agttgtaaac ttagaacacc caattgaagt accagtaggt 180
aaagcaactc tgggacgtat catgaacgtt ctgggtgacc ctattgatat gaaaggtgat 240
atcgccgaag aagagcgtg gtctattcac cggtcagcgc caagctatga agaattagct 300
aactcaacag aactgctaga aaccggtatc aaagtaatgg acttaatctg tccattcgcg 360
aaaggtggtg aagttggtct gttcgggtgt gctgggtgtg gtaaaacagt aaacatgatg 420
gaactgatcc gtaacatcgc gattgagcac tcaggttact cagtattcgc tgggtgttggt 480
gagcgtaccc gtgaaggtaa cgacttctat catgaaatga ctgattctaa cggttctggat 540
aaagtatcac tggtttatgg ccagatgaac gagccaccag gaaaccgtct gcgtgttgctg 600
ctgactggtc tgactatggc tgaaaaattc cgtgacgaag gtcgtgacgt actgctgttc 660
gttgacaaca tttatcggtt tacactggca ggtactgaag tatcagcact gttagggtcgt 720
atgccttcag cggtaggtta tcagccaaca ttggcagaag agatgggtgt tctacaagaa 780
cgtatcactt ctacaaaaac cggttctatc ac 812

```

<210> 339
 <211> 819
 <212> DNA
 <213> Providencia stuartii ATCC 33672

```

<400> 339
tcaagatgca gtacaaaaag tgtacgatgc gcttgagggt gttaacggta aagaaaaact 60
ggtgctggaa gttcagcaac agttaggcgg ttggtgtgtc caatgggtac 120
atcagatggc ctaagcgtg gtttagaagt taaaaattta gaacacccaa ttgaagtacc 180
agtaggtaaa gcaacactcg gacgtatcat gaacgttctg ggtgacccta ttgatatgaa 240
aggtgatatc ggcgaagaag agcgttggtc tattcaccgc gctgcaccaa gctacgaaga 300

```

gctatcgagc	tcaactgaac	tgctagagac	aggatatacaa	gtcatggact	tgatctgtcc	360
attcgcgaaa	ggtgggtaaag	ttggtctgtt	cggtgggtgcg	ggtggttgga	aaacggtaaa	420
catgatggaa	cttatccgta	acatcgcgat	tgagcactca	ggttactcag	tattcgcagg	480
tggtgggtgag	cgtacccgtg	aaggtaacga	cttctatcat	gaaatgacag	attcaaacgt	540
tcttgacaaa	gtatcactgg	tttatgggtca	gatgaatgag	ccaccaggaa	accgtctacg	600
cgtagcattg	actgggttga	ctatggctga	gaaattccgt	gacgaaggcc	gtgatgttct	660
gttgttcgtg	gataacatct	atcggttatac	actggcaggt	acagaagtat	cggctctgtt	720
aggtcgtatg	ccatcagcag	taggttatca	gccaacattg	gcagaagaga	tgggtgttct	780
tcaagaacgt	atcacttcta	ctaagacagg	ttctatcac			819

<210> 340

<211> 857

<212> DNA

<213> *Psychrobacter phenylpyruvicus* ATCC 23333

<400> 340

aaccgcactg	acgtgcctca	aatttatgac	gcgttagttg	tagatggtag	cgaaccacc	60
ctagaagttc	agcagcagct	gggcgatggt	gtggtagcta	ctattgcaat	gggatctact	120
gaaggtctta	agcgtgggtt	accagtaaca	aacactgggt	ccccaattac	agttccagta	180
ggtgatgcga	cttttaggtcg	tattatggac	gttttaggtc	gtccaattga	cgaacaaggt	240
ccagttaatt	ctgaagacca	ttggtcaatc	caccgtcaag	cgccatcata	tgatgagcaa	300
gctaacagta	ctgacctatt	agagacaggt	attaaagtaa	ttgacttact	ttgtccggtc	360
gctaaagggg	gtaaagttgg	tctgttcggt	ggtgcgggtg	ttggtaaaac	cgtaaaccatg	420
atggaattga	tttaataacat	cgctcttaag	cactcaggtt	tatcagtatt	cgctgggtgtg	480
ggtgagcgtg	ctcgtgaagg	taacgacttc	taccacgaga	tgcaagaagc	gggtgttgtt	540
gacgttgaaa	acttcaccaa	ctcaaaagtt	gcgatgggtt	atgggtcagat	gaatgagcca	600
ccaggttaacc	gtttacgtgt	tgcgtaaac	ggtctgacta	tggttgagta	cttccgtgat	660
caaaaagatg	aaaacggtaa	aggtaaagac	gttctattat	tcgttgataa	catctaccgc	720
tacacgctag	cgggtactga	agtatcagca	cttctaggtc	gtatgccatc	agcagtaggt	780
tatcagccaa	cactagcgga	agagatgggt	gtactacaag	agcgtattac	ttcaactcag	840
actggttcta	ttacttc					857

<210> 341

<211> 832

<212> DNA

<213> *Rahnella aquatilis* DSM 4594

<400> 341

gttccctcag	gatgcagtac	cgaacgtgta	caatgctctt	gaggtagaaa	acggtagctc	60
caaactgggtg	ctggaagttc	agcaacagtt	aggcggtggc	gttggttcgtt	gtatcgcaat	120
gggtacctca	gacggcctgc	gtcgcggtct	gaaagtgaac	aacctggaac	acccaattga	180
agtaccggta	ggtaaagcga	ctctgggtcg	tatcatgaac	gtattgggtg	aaccaatcga	240
actgaaaggt	gaaatcggcg	aagaagaacg	tcgtgctatt	caccgtgctg	cgcttctcta	300
tgaagagctg	gcaaactccc	aggaattgct	ggaaaccggg	atcaaagtta	tggacctgat	360
gtgtccggtc	gctaagggcg	gtaaagttgg	tctgttcggt	ggtgcgggtg	taggtaaaac	420
tgtgaacatg	atggagctga	tccgtaacat	tgcatcgag	cactccggtt	attctgtgtt	480
tgaggcggtg	ggtgaacgta	ctcgtgaggg	taacgacttc	taccacgaaa	tgactgattc	540
caacgttatc	gacaaagttt	ccctgggtgta	tggccagatg	aatgagccac	caggtaacgc	600
tctgcgcgtt	gactgaccg	gcctgaccat	ggcggaaaaa	ttccgtgatg	aaggtcgtga	660
cgtactgctg	ttcgttgaca	acatttacgc	ttacaccctg	gccggtaccg	aagtgtccgc	720
acttctgggc	cgtatgccat	cggcggtagg	ttatcagcca	acgctggcgg	aagagatggg	780
cgctctgcaa	gaacgtatca	cctcgaccaa	aagtggttct	atcacctccg	ta	832

<210> 342

<211> 824

<212> DNA

<213> *Salmonella choleraesuis* subsp. *arizonae* ATCC 13314

<400> 342

ttccctcagg	atgccgtacc	acgcgtgtac	gatgctcttg	agggtgcagaa	tggtaatgag	60
aagctgggtgc	tggaagttca	gcagcagctt	ggcggtcggt	tcgtgcgtac	catcgcgatg	120
gggtcttctg	acggtctgcg	tcgcggtctt	gatgtaaaag	atctcgaaca	cccgatcgaa	180
gtcccggtag	gtaaagccac	gctgggtcgt	atcatgaacg	tcctgggcga	accggtcgat	240

```

atgaaaggcg agatcggcga agaagagcgt tgggetatct accgcgcggc gccgtcctac 300
gaagagttgt caaactctca ggaactgctg gaaaccggta taaaagttat cgacctgatg 360
tgtccgttcg cgaagggcgg taaagtcggt ctgttcgggt gcgcgggtgt aggtaaaacc 420
gtaaacatga tggagcttat ccgtaacatc gcgacgcgagc actccgggtta ctctgtgttt 480
gcgggcgtag gtgaacgtac tcgtgagggt aacgacttct accacgaaat gaccgactct 540
aacgttatcg ataaagtatc cctgggtgat ggccagatga acgagccacc gggaaaccgt 600
ctgcgcgttg cattgaccgg cctgaccatg gcggaaaaat tccgtgatga aggtcgtgac 660
gttctgctgt tcgtcgacaa catctaccgt tataccctcg ccggtacgga agtatccgca 720
ctgctgggtc gtatgccttc cgcggtaggt taycasccga ctctggcgga agagatgggc 780
gttctgcagg aacgtatcac ctccaccaa accggttcta tcac 824

```

<210> 343

<211> 820

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 7001

<400> 343

```

gatgccgtac cagcgcgtgta cgatgccctt gaggtgcaga atggtaatga gaagctgggtg 60
ctggaagttc agcagcagct tggcggcggt atcgtgcgta ccacgcgat ggggtcttct 120
gacggtctgc gtcgcggtct ggatgtaaaa gatctcgaac acccgatcga agtcccggta 180
ggtaaagcca cgctgggtcg tatcatgaac gtcctgggcg aaccggtcga catgaaaggc 240
gagatcggcg aagaagagcg ttgggcgatt caccgcgcag caccttccta cgaagagttg 300
tcaaactctc aggaactgct ggaaaccggt atcaaagtta tcgacctgat gtgtccgttc 360
gcgaagggcg gtaaagtcgg tctgttcggt ggtgcgggtg taggtaaaac cgtaaacatg 420
atggagctta ttctgaacat cgcgatcgag cactccggtt actcagtgtt tgcgggcgta 480
ggggaacgta ctctgtgagg taacgacttc taccacgaaa tgaccgactc caacgttatc 540
gataaagtat ccctgggtgta tggccagatg aacgagccgc cgggaaaccg tctgcgcgtt 600
gacctgaccg gcctgaccat ggcggagaaa ttccgtgacg aaggtcgtga tgtactgctg 660
ttcgtcgata acatctatcg ttacaccctg gccggtacgg aagtatccgc actgctgggc 720
cgtatgcctt ccgcagtagg ttaccagccg actctggcgg aagagatggg cgttctgcag 780
gaacgtatca cctccaccaa aaccggttct atcacctccg 820

```

<210> 344

<211> 831

<212> DNA

<213> *Salmonella choleraesuis* subsp. *diarizonae* ATCC 43973

<400> 344

```

ttccctcagg atgccgtacc acgcgtgtac gatgctcttg aggtgcagaa tggtaatgag 60
aagctgggtg tggaagttca gcagcagctt ggccggcggt tctgtgcgtac catcgcgatg 120
gggtcttctg acggtctgcg tcgcggtctt gatgtaaaag atctcgaaca cccgatcgaa 180
gtcccggtag gtaaagcaac gctgggtcgt atcatgaacg tcctgggtga accggtcgat 240
atgaaaggcg agatcggcga agaagagcgt tgggcgattc accgcgcggc gccgtcctac 300
gaagagttgt caaactctca ggaactgctg gaaaccggta tcaaagttat cgacctgatg 360
tgtccgttcg cgaagggcgg taaagtcggt ctgttcgggt gcgcgggtgt aggtaaaacc 420
gtaaacatga tggagcttat ccgtaacatc gcgacgcgagc actccgggtta ctctgtgttt 480
gcgggcgtag gtgaacgtac tcgtgagggt aacgacttct accacgaaat gaccgactct 540
aacgttatcg ataaagtatc cctgggtgat ggccagatga acgagccacc gggaaaccgt 600
ctgcgcgttg cattgaccgg cctgaccatg gcggaaaaat tccgtgatga aggtcgtgac 660
gttctgctgt tcgtcgacaa catctaccgt tataccctcg ccggtacgga agtatccgca 720
ctgctgggtc gtatgccttc cgcggtaggt tatcagccga ctctggctga agaaatgggc 780
gttctgcagg aacgtatcac ctccaccaa accggttcta tcacctccgt a 831

```

<210> 345

<211> 831

<212> DNA

<213> *Salmonella choleraesuis* subsp. *houtenae* ATCC 43974

<400> 345

```

ttccctcagg atgccgtacc acgcgtgtac gatgctcttg aggtgcagaa tggtaatgag 60
aagctgggtg tggaagttca gcagcagctt ggccggcggt tctgtacgtac catcgcgatg 120
gggtcttctg acggtctgcg tcgcggtctg gatgtaaaag atctcgaaca cccgatcgaa 180
gtcccggtag gtaaagctac gctgggtcgt atcatgaacg tcctgggcga accggtcgat 240

```

```

atgaaaggcg agatcggcga agaagagcgt tgggcgattc accgcgctgc gccgtcctac 300
gaagagttgt caaactctca ggaactgctg gaaaccggta tcaaagttat cgacctgatg 360
tgtccgttcg cgaagggcgg taaagtcggt ctgttcgggt gcgcgggtgt aggtaaaacc 420
gtaaacatga tggagcttat ccgtaacatc gcgatcgagc actccgggta ctccgtgttt 480
gcgggcgtag gtgaacgtac tcgtgagggt aacgacttct accacgaaat gaccgactcc 540
aacgttatcg ataaagtatc cctgggtgat ggtcagatga acgagccgcc gggaaaccgt 600
ctgcgcggtg cattgaccgg cctgaccatg gcggaaaaat tccgtgacga aggtcgtgac 660
gttctgctgt tcgtcgataa catctatcgt tacaccctgg ccggtacgga agtatccgca 720
ctgctgggtc gtatgccttc cgcggtaggt tatcagccga cgctggcgga agagatgggc 780
gttctgcagg aacgtatcac ctccaccaag accggttcta tcacctccgt a 831

```

<210> 346

<211> 829

<212> DNA

<213> *Salmonella choleraesuis* subsp. *indica* ATCC 43974

<400> 346

```

ttccctcagg atgccgtacc acgcgtgtac gatgcccttg aggtgcagaa tggtaatgag 60
aagctcgtgc tggaagttca gcagcagctt ggccggcggt tgcgtgcgtac catcgcgatg 120
gggtcttctg acggtctgcg tcgcggtctg gatgtaaaag atctcgaaca cccgatcgaa 180
gtcccggtag gtaaagccac gctgggtcgt atcatgaacg tcctgggcga accggtcgat 240
atgaaaggcg agatcggcga agaagagcgt tgggcgattc accgcgcggc gccgtcctat 300
gaagagttgt caaactctca ggaactgctg gaaaccggta tcaaagttat cgacctgatg 360
tgtccgttcg cgaagggcgg taaagtcggt ctgttcgggt gtgcgggctg aggtaaaacc 420
gtaaacatga tggagcttat ccgtaacatc gcgatcgagc actccgggta ctctgtgttt 480
gcgggcgtag gtgaacgtac tcgtgagggt aacgacttct accacgaaat gaccgactcc 540
aacgttatcg acaaagtatc cctgggtgat ggccagatga acgagccgcc gggaaaccgt 600
ctgcgcggtg cactgaccgg cctgaccatg gcggagaagt tccgtgacga aggtcgtgac 660
gtactgctgt tcgtcgataa catctatcgt tataccctgg ccggtacgga agtttccgca 720
ctgctgggtc gtatgccttc cgcggtaggt tatcagccaa ctctggcgga agagatgggc 780
gttctgcagg aacgtatcac ctccaccaa accggttcta tcacctccg 829

```

<210> 347

<211> 817

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 9150

<400> 347

```

gccgtaccac gcgtgtacga tgcccttgag gtgcagaatg gtaatgagaa gctgggtgctg 60
gaagttcagc agcagcttgg cggcggtatc gtgcgtacca tcgcgatggg gtcttctgac 120
gggtctgcgtc gcggtctgga tgtaaaagat ctcgaaacacc cgatcgaagt cccggtaggt 180
aaagctacgc tgggtcgtat catgaacgtc ctgggcgaac cggtcgacat gaaaggcgag 240
atcggcgaag aagagcggtg ggcgattcac cgcgcagcgc cttectacga agagtgtgca 300
aactctcagg aactgctgga aaccgggtatc aaagtattcg acctgatgtg tccgttcgctg 360
aagggcggtg aagtcggtct gttcggtggt gcgggtgtag gtaaaaccgt aaacatgatg 420
gagcttatcc gtaacatcgc gatcgagcac tccggttact ctgtgtttgc gggcgtaggt 480
gaacgtactc gtgagggtaa cgacttctac catgaaatga ccgactccaa cgttatcgat 540
aaagtatccc tgggtgatgg ccagatgaac gagccgcggg gaaaccgtct gcgcgttgca 600
ctgaccggcc tgacctggc ggagaaatc cgtgacgaag gtcgtgacgt actgctgttc 660
gtcgataaca tctatcgta caccctggcc ggtacggaag tatccgcact gctgggtcgt 720
atgccttcg cggtaggta ccagccgact ctggcggaag agatgggcgt tctgcaggaa 780
cgtatcacct ccaccaagac cggttctatc acctccg 817

```

<210> 348

<211> 806

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 8759

<400> 348

```

gccgtaccac gcgtgtacga tgcccttgag gtgcagaatg gtaatgagaa gctgggtgctg 60
gaagttcagc agcagcttgg cggcggtatt gtgcgtacca tcgcgatggg gtcttctgac 120
gggtctgcgtc gcggtctgga tgtaaaagat ctcgaaacacc cgatcgaagt cccggtaggt 180
aaagccacgc tgggtcgtat catgaacgtc ctgggcgaac cggtcgacat gaaaggcgag 240

```

atcggcgaag	aagagcgttg	ggcgattcac	cgcgagcgc	cttcctacga	agagttgtca	300
aactctcagg	aactgctgga	aaccgggtatc	aaagtattcg	acctgatgtg	tccgttcgcg	360
aagggcggta	aagtcggtct	gttcgggtggt	gcgggtgtgg	gtaaaaccgt	aaacatgatg	420
gagcttatcc	gtaacatcgc	gacgagcac	tccggttact	ctgtgtttgc	gggcgtaggt	480
gaacgtactc	gtgagggtaa	cgacttctac	cacgaaatga	ccgactccaa	cgttatcgat	540
aaagtatccc	tggtgtatgg	ccagatgaac	gagccgccgg	gaaaccgtct	gcgcgttgca	600
ttgaccggtc	tgaccatggc	ggagaaattc	cgtgacgaag	gtcgtgacgt	actgctgttc	660
gtcgataaca	tctatcgtta	caccctggcc	ggtacggaag	tatccgcact	gctgggcccgt	720
atgccttccg	cagtaggtta	ccagccgact	ctggcggaag	agatgggcgt	tctgcaggaa	780
cgtatcacct	ccacaaaac	cggttc				806

<210> 349

<211> 831

<212> DNA

<213> *Salmonella choleraesuis* subsp. *salamae* ATCC 43972

<400> 349

ttccctcagg	atgccgtacc	acgcgtgtac	gatgcccttg	aggtgcagaa	tggtaatgag	60
aagctggtgc	tggaagtcca	gcagcagctt	ggcggcggtg	tcgtgcgtac	catcgcgatg	120
gggtcttctg	acggtctgcg	tcgkgtctcg	gatgtaaaag	atctcgaaca	cccgatcgaa	180
gtcccggtag	gtaaagcaac	gctggggccgt	atcatgaacg	tactgggcga	accggtcgac	240
atgaaaggcg	agattgggtga	agaagagcgt	tgggctattc	accgtgctgc	gccgtcctac	300
gaagagttgt	caaactctca	ggaactgctg	gaaaccggta	tcaaagttat	cgacctgatg	360
tgtccgttcg	cgaaggcgcg	taaagtccgt	ctgttcggtg	gcgcgggtgt	aggtaaaacc	420
gtaaacatga	tggaagctcat	ccgtaacatc	gcgatcgagc	actccggtta	ctccgtgttt	480
gcgggcgtag	gtgaacgtac	tcgtgagggt	aacgacttct	accacgaaat	gaccgactcc	540
aacgttatcg	ataaagtatc	cctgggtgtat	ggccagatga	acgagccgcc	gggaaaccgt	600
ctgcgcgttg	cactgaccgg	cctgaccatg	gcggaaaaat	tccgtgacga	aggctcgtgac	660
gtactgctgt	tcgtcgataa	catctatcgt	tataccctgg	ccggtacgga	agtatccgca	720
ctgctgggtc	gtatgccttc	cgcggtaggt	tatcagccga	cgctggcgga	agagatgggc	780
gttctgcagg	aacgtatcac	ctccactaaa	accggttcta	tcacctccgt	a	831

<210> 350

<211> 823

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 10749

<400> 350

ttccctcagg	atgccgtacc	acgcgtgtac	gatgcccttg	aggtgcagaa	tggtaatgag	60
aagctggtgc	tggaagtcca	gcagcagctt	ggcggcggtg	tcgtgcgtac	catcgcgatg	120
gggtcttctg	acggtctgcg	tcgcggtctg	gatgtaaaag	atctcgaaca	cccgatcgaa	180
gtcccggtag	gtaaagctac	gctgggtcgt	atcatgaacg	tcctgggcga	accggtcgac	240
atgaaaggcg	agatcggcga	agaagagcgt	tgggctattc	accgcgcagc	gccttcctac	300
gaagagttat	caaactctca	ggaactgctg	gaaaccggta	tcaaagttat	cgacctgatg	360
tgtccgttcg	cgaaggcgcg	taaagtccgt	ctgttcggtg	gtgcgggtgt	aggtaaaacc	420
gtaaacatga	tggaagcttat	ccgtaacatc	gcgatcgagc	actccggtta	ctctgtgttt	480
gcgggcgtag	gtgaacgtac	tcgtgagggt	aacgacttct	accatgaaat	gaccgactcc	540
aacgttatcg	ataaagtatc	cctgggtgtat	ggccagatga	acgagccgcc	gggaaaccgt	600
ctgcgcgttg	cactgaccgg	cctgaccatg	gcggagaaat	tccgtgacga	aggctcgtgac	660
gtactgctgt	tcgtcgataa	catctatcgt	tacaccctgg	ccggtacgga	agtatccgca	720
ctgctgggtc	gtatgccttc	cgcggtaggt	taccagccga	ctctggcgga	agagatgggc	780
gttctgcagg	aacgtatcac	ctccaccaag	accggttcta	tca		823

<210> 351

<211> 823

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 14028

<400> 351

ttccctcagg	atgccgtacc	acgcgtgtac	gatgcccttg	aggtgcagaa	tggtaatgag	60
aagctggtgc	tggaagtcca	gcagcagctt	ggcggcggtg	tcgtgcgtac	catcgcgatg	120
gggtcttctg	acggtctgcg	tcgcggtctg	gatgtaaaag	atctcgaaca	cccgatcgaa	180
gtcccggtag	gtaaagctac	gctgggtcgt	atcatgaacg	tcctgggcga	accggtcgac	240

atgaaaggcg	agatcggcga	agaagagcgt	tggggcgattc	accgcgcagc	gccttcctac	300
gaagagttat	caaactctca	ggaactgctg	gaaaccggta	tcaaagttat	cgacctgatg	360
tgtccggttcg	cgaagggcgg	taaagtcggg	ctgttcgggtg	gtgcgggtgt	aggtaaaacc	420
gtaaacaatga	tggagcttat	cgtaacatc	gcgatcgagc	actccgggta	ctctgtgttt	480
gcggggcgtag	gtgaacgtac	tcgtgagggg	aacgacttct	accatgaaat	gaccgactcc	540
aacgttatcg	ataaagtatc	cctgggtgtat	ggccagatga	acgagccgcc	gggaaaccgt	600
ctgcgcggttg	cactgaccgg	cctgaccatg	gcggagaaaat	tccgtgacga	aggctcgtgac	660
gtactgctgt	tcgtcgataa	catctatcgt	tacaccctgg	ccggtacgga	agtatccgca	720
ctgctgggtc	gtatgccttc	cgcggttaggt	taccagccga	ctctggcgga	agagatgggc	780
gttctgcagg	aacgtatcac	ctccaccaag	accggttcta	tca		823

<210> 352

<211> 810

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 51955

<400> 352

gccgtaccac	gcgtgtacga	tgcccttgag	gtgcagaatg	gtaatgagaa	gctgggtgctg	60
gaagttcagc	agcagcttgg	cggcggtatc	gtgcgtacca	tcgcgatggg	gtcttctgac	120
ggctctgcgc	gcggtctgga	tgtaaaagat	ctcgaacacc	cgatcgaagt	cccggtaggt	180
aaagccacgc	tgggtcgtat	catgaacgtc	ctgggcgaac	cggtcgacat	gaaagggcag	240
atcggcgaag	aagagcgttg	ggcgattcac	cgcgacgac	cttcctacga	agagttgtca	300
aactctcagg	aactgctgga	aaccggatc	aaagtattcg	acctgatgtg	tccgttcgcg	360
aagggcggtg	aagtcggtct	gttcggtggt	gcgggtgtag	gtaaaaccgt	aaacatgatg	420
gagcttattc	gtaacatcgc	gatcgagcac	tccggttact	ctgtgtttgc	gggcgtaggg	480
gaacgtactc	gtgagggtaa	cgacttctac	cacgaaatga	ccgactccaa	cgttatcgat	540
aaagtctccc	tgggtgatgg	ccagatgaac	gagccgcggg	gaaaccgtct	gcgcggttga	600
ttgaccggtc	tgaccatggc	ggagaaaatc	cgtgacgaag	gtcgtgacgt	actgctgttc	660
gtcgataaca	tctatcggtt	caccctgggc	ggtacggaag	tatccgcact	gctggggccgt	720
atgccttccg	cagtaggtta	ccagccgact	ctggcggaag	agatgggcgt	tctgcaggaa	780
cgtatcacct	ccaccaaaac	cggttctatc				810

<210> 353

<211> 820

<212> DNA

<213> *Serratia ficaria* ATCC 33105

<400> 353

gatgccgtac	caaaagtgtg	cgatgccctt	gaggtagaaa	acgggtaccga	gaaactgggtg	60
ctggaagttc	agcagcagct	gggcggtggc	gtcgttcgct	gtatcgcaat	ggggacctct	120
gacgggtctgc	gtcgcggtct	gaaagtgaac	aacctggaac	acccgattga	agtgccgggtg	180
ggtaaagcta	ccctggggccg	tatcatgaac	gtattggggcg	aaccaatcga	catgaaaggc	240
gagatcggcg	aagaagagcg	ttggggcggt	caccgtcctg	cgccaagcta	cgaagagctg	300
tccaactccc	aggacctgct	ggaaaaccgt	atcaaggtaa	tggacctgat	ttgtccgttc	360
gccaagggcg	gtaaagtcgg	tctgttcggt	ggtgcggggcg	tgggcaaaac	cgtaaaccatg	420
atggagctga	tccgtaacat	cgcgatcgag	cactccggtt	attccgtggt	tgcggggcgtg	480
ggcgagcgta	ctcgtgaggg	taacgacttc	taccacgaaa	tgaacgactc	caacgttctg	540
gacaaaagtat	ccctgggttta	cggccagatg	aacgagccgc	cgggtaaccg	tctgcgcggtt	600
gcattgaccg	gcctgaccat	ggcggagaaa	ttccgtgacg	aaggccgcga	cgttctgctg	660
ttcgttgaca	acatttaccg	ttacaccctg	gccgggtaccg	aagtgtccgc	acttctgggc	720
cgtatgccat	ccgcggtagg	ttatcagcca	acgctggcgg	aagagatggg	cgttctgcaa	780
gaacgtatca	cctcgaccaa	gaccggttcc	atcacctccg			820

<210> 354

<211> 816

<212> DNA

<213> *Serratia fonticola* ATCC 29844

<400> 354

gatgccgtac	cgaaagtgtg	caacgctctt	gaggttgcaa	acggcaccga	gaaattgggtg	60
ctggaagttc	agcaacagct	gggtggcggc	gtgggttcgct	gtatcgcaat	ggggacctca	120
gacgggtctgc	gtcgtgggtct	ggccgtaacc	gacctgcagc	acccaattga	agtaccggta	180
ggtaaagcta	ccctggggccg	tatcatgaac	gtattgggtg	aaccaatcga	catgaagggc	240

gacatcgggc	aagaagaacg	ttgggctatt	caccgccctg	cgccaagcta	cgaagagctg	300
tccagctccc	aggatctgct	ggaaaccggt	atcaaggtaa	tggacctgat	ctgcccgttc	360
gccaaaggtg	gtaaagtgtg	tctgttcggt	ggtgctgggt	taggtaaaaac	cgtaaaccatg	420
atggagctga	tccgtaacat	cgcgatcgag	cactccggtt	attctgtgtt	tgccggcgctg	480
ggtgaacgta	ctcgtgaggg	taacgacttc	taccacgaaa	tgaccgattc	caacgtactg	540
gacaaagttt	ccctgggtta	cggccagatg	aacgagccac	caggtaaccg	tctgcgcgtt	600
gcgctgaccg	gcctgaccat	ggctgagaag	ttccgtgacg	aaggctcgtga	cgtactgctg	660
ttcgtcgata	acatctaccg	ttataccctg	gccggtaccg	aagtgtccgc	acttctgggc	720
cgtatgccat	cggcggtagg	ttatcagcca	acgctggcgg	aagagatggg	tgttctgcaa	780
gaacgtatca	cctctaccaa	gactggttca	atcacc			816

<210> 355
 <211> 822
 <212> DNA
 <213> *Serratia grimesii* ATCC 14460

<400> 355						
gatgccgtac	caaaagtgtg	caacgctctt	gaggtagaaa	acggtgccaa	taagctggtg	60
ctggaagtcc	agcaacagtt	ggcggtggc	gtggttcgct	gtatcgcaat	ggggacctct	120
gatggtctgc	gtcgcggtct	gaaagtcaca	gacctggacc	acccaattga	agtaccggta	180
ggtaaagcta	ctctgggccc	tatcatgaac	gtattgggtg	aaccaatcga	catgaagggc	240
gatatcggcg	aagaagaacg	ttgggcgatt	caccgtccgg	cgccaagcta	cgaagatttg	300
gccaaactccc	aggatctgct	ggaaaccggt	atcaaggtaa	tggacctgat	ctgcccgttc	360
gccaaaggtg	gtaaagtcgg	tctgttcggt	ggtgcgggtg	ttggtaaaac	cgtaaaccatg	420
atggagctga	tccgtaacat	cgcgatcgag	cactccggtt	attctgtgtt	tgccggcgctg	480
ggtgagcgta	ctcgtgaggg	taacgacttc	taccacgaaa	tgaacgactc	caacgtactg	540
gacaaagtat	ccctgggtta	cggccagatg	aacgagccac	cgggtaaccg	tctgcgcgtt	600
gctctgaccg	gtctgaccat	ggctgagaaa	ttccgtgacg	aaggccgtga	cgttctgctg	660
ttcgttgata	acatctaccg	ttataccctg	gccggtaccg	aagtgtccgc	acttctgggc	720
cgtatgccat	cggcggtagg	ttatcagcca	acgctggcgg	aagagatggg	tgttctgcaa	780
gaacgtatca	cctctaccaa	gactggttca	atcacctccg	ta		822

<210> 356
 <211> 819
 <212> DNA
 <213> *Serratia liquefaciens* ATCC 27592

<400> 356						
atgccgtacc	aaaagtgtac	aatgctcttg	aggtagaaaa	cggtagccag	aagctgggtgc	60
tggaaagtcca	gcagcagttg	ggcggtggcg	tagttcgctg	tatcgcgatg	gggacctcag	120
atggtctgcg	ccgcggtctg	aaagtgaacg	atctggaaaca	cccaattgaa	gtaccggtag	180
gtaaagctac	cctgggcccgt	atcatgaacg	tattgggtga	accaatcgac	atgaaaggcg	240
acatcggcga	agaagaacgt	tgggcgattc	accgtccagc	gccaagctac	gaagatttgt	300
caaaactccc	ggatctgctg	gaaaccggta	tcaaggttat	ggacctgatt	tgtccgttcg	360
ctaagggcgg	taaagtgtgt	ctgttcggtg	gtgctggtgt	tggtaaaacc	gtaaaccatga	420
tggagctgat	ccgtaacatc	gcgatcgagc	actccggtta	ttccgtgttt	gcaggcggtgg	480
gtgagcgta	tcgtgagggg	aacgacttct	accacgaaat	gaacgactcc	aacgtactgg	540
acaaagtatc	cctgggtttac	ggccagatga	acgagccacc	gggtaaccgt	ctgcgcgttg	600
ctctgaccgg	tctgaccatg	gcggagaaat	tccgtgacga	aggccgcgac	gttctgctgt	660
tcgttgataa	catttaccgt	tataccctgg	ccggtaccga	agtgtccgca	cttctggggc	720
gtatgccatc	tgcggtagg	tatcagccaa	cgtggcggga	agagatgggc	gttctgcaag	780
aacgtatcac	ctctaccaag	accggttcta	tcacttccg			819

<210> 357
 <211> 805
 <212> DNA
 <213> *Serratia marcescens* ATCC 13880

<400> 357						
tcaggatgcc	gtaccgaaa	tgtacgacgc	ccttgaggta	gaaaacggca	ccgaaaaact	60
ggtgttgga	gttcagcaac	agctggggcg	tggcggtggt	cgctgtatcg	caatggggac	120
ctccgacggt	ctgcgtcgcg	gtctgaaagt	gaacaacctg	gaccaccgga	ttgaagtgcc	180
ggtgggtaaa	gctaccctgg	gtcgtatcat	gaacgtattg	ggtcaaccga	tcgacatgaa	240

```

aggcgacatc  ggcaagaag  agcgttgggc  gattcaccgc  gcggcgccaa  gctacgaaga  300
gctgtcaagc  tctcaggaac  tgctggaaac  cggtatcaag  gtaatggacc  tgatttgtcc  360
gttcgccaag  ggcggtaaag  tcggtctgtt  cgggcggtgcg  ggcgtaggta  aaaccgtaaa  420
catgatggag  ctgatccgta  acatcgcgat  cgagcactcc  ggttattccg  tgtttgcggg  480
cgtgggcgag  cgtactcgtg  agggtaacga  cttctaccac  gaaatgaccg  actccaacgt  540
tctggacaaa  gtatccctgg  ttacggcca  gatgaacgag  ccaccaggta  accgtctgcg  600
cgttgcgctg  accggtctga  ccatggcgga  gaaattccgt  gacgaaggcc  gtgacgttct  660
gctgttcgtt  gacaacatct  accgttacac  cctggccggg  accgaagtgt  ccgcacttct  720
gggccgtatg  ccatccgcgg  taggttatca  gccaacgctg  gcggaagaga  tgggcgttct  780
gcaagaacgt  atcacctcga  ccaag                                     805

```

<210> 358
 <211> 822
 <212> DNA
 <213> *Serratia odorifera* ATCC 33077

```

<400> 358
gatgccgtac  caaaagtgtg  cgatgccctt  gaggtagaaa  acggtaccga  aactctgggtg  60
ctggaagtgc  agcagcagct  gggcggtggc  gtggttcgtt  gtatcgctat  gggcacctcc  120
gacggtttgc  gtcgcggcct  gaaagtgaac  gatctgcaac  acccaatcga  agtcccgggt  180
ggcaaggcaa  cgctgggtcg  tatcatgaac  gtattgggtc  aaccaatcga  catgaaaggc  240
gacatcggcg  aagaagagcg  ttgggcgatt  caccgcgcgg  cgccaagcta  cgaagaactg  300
tccaactccc  aggatctgct  ggaaaccggg  atcaagggtta  tggacctgat  ctgcccgttt  360
gccaaagggtg  gtaaagtgcg  tctgttcggt  ggtgcgggtg  ttggtaaaac  cgtaaacatg  420
atggagctga  tccgtaacat  cgcatcgag  cactccgggt  attcagtgtt  tgcgggcgtg  480
ggtgagcgta  ctctgtaggg  taacgacttc  taccacgaaa  tgaccgactc  caacgtactg  540
gacaaggttt  ccctggttta  cggccagatg  aacgagccac  cgggtaaccg  tctgcgcgtt  600
gcgctgaccg  gtctgaccat  ggccgagaaa  ttccgtgacg  aaggctcgtg  cgttctgctg  660
ttcgttgaca  acatttacgg  ttacaccctg  gccggtaccg  aagtgtctgc  acttctgggc  720
cgtatgccat  cggcggtagg  ttatcagcca  acgctggcgg  aagagatggg  cgttctgcaa  780
gaacgtatca  cctcgaccaa  gaccggttct  atcacctccg  ta                                     822

```

<210> 359
 <211> 805
 <212> DNA
 <213> *Serratia plymuthica* ATCC 183

```

<400> 359
gtgtacaacg  ctcttgaggt  agaaaacggg  gccataaagc  tgggtgctgga  agttcagcaa  60
cagctgggcg  gtggcggtgt  tcgctgtatc  gcgatgggga  cctctgatgg  tctgcgtcgc  120
ggtctgaaag  tgatcgacct  ggatcacccg  attgaagtac  cggtaggtaa  agctaccctg  180
ggccgtatca  tgaacgtatt  gggtagacca  atcgacatga  aaggcgacat  cggcgaagaa  240
gaacgtttgg  caattcacgg  tccagcgcca  agctacgaag  atttggccaa  ctcccaggat  300
ctgctggaaa  ccggtatcaa  gggtatggac  ctgatctgtc  cgttcgctaa  gggcggtaaa  360
gtgggtctgt  tcggcggtgc  gggcggtggg  aaaaccgtaa  acatgatgga  gctgatccgt  420
aacatcgcg  tcgaacactc  cggttattcc  gtgtttgcgg  tactggacaa  agtatccctg  480
gagggtaacg  acttctacca  cgaaatgaac  gactccaacg  tactggacaa  agtatccctg  540
gtttacggcc  agatgaacga  gccaccgggt  aaccgtctgc  gcgttgctct  gaccggtctg  600
accatggcgg  agaaattccg  tgacgaagcg  cgcgacgttc  tgctgttcgt  tgataacatc  660
taccgttata  ccctggccgg  taccgaagtg  tccgcacttc  tgggccgtat  gccatctgcg  720
gtaggttatc  agccaacgct  ggcggaagag  atgggcgttc  tgcaagaacg  tatcacctct  780
accaagaccg  gttctatcac  ctccg                                     805

```

<210> 360
 <211> 831
 <212> DNA
 <213> *Serratia rubidaea* ATCC 27593

```

<400> 360
ttccctcagg  atgccgtacc  aaaagtgtac  gatgcccttg  aggtagagaa  cggtaacgaa  60
aaactgggtg  tggaagttca  gcagcagctg  ggcggcgggc  ttgtacgctg  tatcgccatg  120
ggtacttccg  acggtctgcg  tcgcggtctg  aaagttaacg  acctcgagca  cccaatcgaa  180
gtgccagttg  gtaaagcaac  gctgggtcgt  atcatgaacg  tattgggtca  gccaatcgac  240

```

```

atgaaaggcg acatcggcga agaagagcgt tgggcgattc accgcgcggc gccaaagctac 300
gaagagctgt ccagctccca agagctgctg gaaaccggta tcaaggtaat ggacctgac 360
tgcccgttcg ccaagggtgg taaagttggt ctgttcgggt gtgcgggcgt aggtaaaacc 420
gtaaaccatga tggagctgat ccgtaacatc gcgacgcgagc actccgggta ctctgtgttt 480
gcgggcgtgg gtgagcgtac tcgtgagggg aacgacttct accacgaaat gaccgactcc 540
aacgtactgg acaaagtatc cctgggtttac ggccagatga acgagccgcc gggtaacccgt 600
ctgcgcgttg cactgaccgg cctgaccatg gcggaaaaat tccgtgatga aggccgcgac 660
gttctgctgt tcgtggataa catctaccgt tacaccctgg ccggtaccga agtgtccgca 720
ctgctcggcc gtatgccatc tgcggtagggt tatcagccaa cgctggcgga agagatgggc 780
gttctgcaag aacgtatcac ctcgaccaag accggttcaa tcacctccgt a 831

```

<210> 361
 <211> 831
 <212> DNA
 <213> *Pseudomonas putida* strain LCDC7172

```

<400> 361
ttccctcagg atgccgtacc gcgcgtgtac gatgctcttg aggtgcaaaa tggtaatgag 60
cgtctggtgc tggaagttca gcagcagctc ggcggcggtg tcgtgcgtac catcgcaatg 120
ggttcctccg acggtctgcg tcgcggtctg gatgtaaaag acctcgaaca cccgatcgaa 180
gtcccggtag gtaaagcgac tctggggcgt atcatgaacg tactgggtga accggtcgac 240
atgaaaggcg agatcgggtga agaagagcgt tgggcgattc accgcgcgagc accttcctac 300
gaagagctgt caaactctca ggaactgctg gaaaccggta tcaaagttat cgacctgatg 360
tgtccgttcg ctaagggcgg taaagttggt ctgttcgggt gtgcgggtgt aggtaaaacc 420
gtaaaccatga tggagctcat tcgtaacatc gcgacgcgagc actccgggta ctctgtgttt 480
gcgggcgtag gtgaacgtac tcgtgagggg aacgacttct accacgaaat gaccgactcc 540
aacgttatcg acaaagtatc cctggtgtat ggccagatga acgagccgcc gggaaaccgt 600
ctgcgcgttg ctctgaccgg tctgaccatg gctgagaaat tccgtgacga aggtcgtgac 660
gttctgctgt tcgttgacaa catctatcgt tacaccctgg ccggtacgga agtatccgca 720
ctgctgggcc gtatgccttc agcggtaggt tatcagccga ccctggcgga agagatgggc 780
gttctgcagg aacgtatcac ctccaccaa actggttcta tcacctccgt a 831

```

<210> 362
 <211> 831
 <212> DNA
 <213> *Shigella boydii* ATCC 9207

```

<400> 362
ttccctcagg atgccgtacc gcgcgtgtac gatgctcttg aggtgcaaaa tggtaatgag 60
cgtctggtgc tggaagttca gcagcagctc ggcggcggtg tcgtgcgtac catcgcaatg 120
ggttcctccg acggtctgcg tcgcggtctg gatgtaaaag acctcgaaca cccgatcgaa 180
gtcccggtag gtaaagcgac tctggggcgt atcatgaacg tactgggtga accggtcgac 240
atgaaaggcg agatcgggtga agaagagcgt tgggcgattc accgcgcgagc accttcctac 300
gaagagctgt caaactctca ggaactgctg gaaaccggta tcaaagttat cgacctgatg 360
tgtccgttcg ctaagggcgg taaagttggt ctgttcgggt gtgcgggtgt aggtaaaacc 420
gtaaaccatga tggagctcat tcgtaacatc gcgacgcgagc actccgggta ctctgtgttt 480
gcgggcgtag gtgaacgtac tcgtgagggg aacgacttct accacgaaat gaccgactcc 540
aacgttatcg acaaagtatc cctggtgtat ggccagatga acgagccgcc gggaaaccgt 600
ctgcgcgttg ctctgaccgg tctgaccatg gctgagaaat tccgtgacga aggtcgtgac 660
gttctgctgt tcgttgacaa catctatcgt tacaccctgg ccggtacgga agtatccgca 720
ctgctgggcc gtatgccttc agcggtaggt tatcagccga ccctggcgga agagatgggc 780
gttctgcagg aacgtatcac ctccaccaa actggttcta tcacctccgt a 831

```

<210> 363
 <211> 802
 <212> DNA
 <213> *Shigella dysenteriae* ATCC 11835

```

<400> 363
gccgtaccgc gcgtgtacga tgctcttgcg gtgcaaaatg gtaatgagcg tctgggtgctg 60
gaagttcagc agcagctcgg cggcggtatc gtgcgtacca tcgcaatggg ttccctccgac 120
ggctcgcgtc gcggtctgga tgtaaaagac ctcgaaacac cgatcgaaat cccggtaggt 180
aaagcgactc tgggccgtat catgaacgta ctgggtgaac cggtcgacat gaaaggcgag 240

```

atcgggtgaag	aagagcggttg	ggctattcac	cgcgcgagcac	cttcctacga	agagctgtca	300
aactctcagg	aactgctgga	aaccggtatc	aaagttatcg	acctgatgtg	tccgttcgct	360
aagggcggtg	aagttgggtc	gttcgggtgg	gcgggtgtag	gtaaaaccgt	aaacatgatg	420
gagctcattc	gtaacatcgc	gatcgagcac	tccggttact	ctgtgtttgc	gggcgtaggt	480
gaacgtactc	gtgagggtaa	cgacttctac	cacgaaatga	cgcactccaa	cgttatcgac	540
aaagtatccc	tggtgtatgg	ccagatgaac	gagccgcgg	gaaaccgtct	gcgcgttgct	600
ctgaccggtc	tgaccatggc	tgagaaatc	cgtgacgaag	gtcgtgacgt	tctgctgttc	660
gttgacaaca	tctatcggtt	caccctggcc	ggtacggaag	tatccgcact	gctgggccgt	720
atgccttcag	cggtaggtta	tcagccgacc	ctggcggaag	agatgggcgt	tctgcaggaa	780
cgtatcacct	ccacaaaaac	cg				802

<210> 364

<211> 819

<212> DNA

<213> *Shigella flexneri* ATCC 12022

<400> 364

atgccgtacc	gcgcgtgtac	gatgctcttg	aggtgcaaaa	tggtaatgag	cgtctggtgc	60
tggaagttca	gcagcagctc	ggcggcggtg	tcgtgcgtac	catcgcaatg	ggttcctccg	120
acgggtctgcg	tcgcgggtctg	gatgtaaaag	acctcgaaca	cccgatcgaa	gtcccggtag	180
gtaaagcgac	tctggggccgt	atcatgaacg	tactgggtga	accggctcgac	atgaaaggcg	240
agatcggtga	agaagagcgt	tgggcgattc	accgcgcagc	accttcctac	gaagagctgt	300
caaactctca	ggaactgctg	gaaaccggta	tcaaagttat	cgacctgatg	tgtccgttcg	360
ctaagggcgg	taaagtgggt	ctgttcggtg	gtcggggtgt	aggtaaaacc	gtaaacatga	420
tggagctcat	tcgtaacatc	gcgatcgagc	actccggtta	ctctgtgttt	gcgggcgtag	480
gtgaacgtac	tcgtgagggt	aacgacttct	accacgaaat	gaccgactcc	aacgttatcg	540
acaaagtatc	cctgggtgtat	ggccagatga	acgagccgcc	gggaaaccgt	ctgcgcgttg	600
ctctgaccgg	tctgaccatg	gctgagaaat	tccgtgacga	aggctcgtgac	gttctgctgt	660
tcgttgacaa	catctatcgt	tacaccctgg	tcggtacgga	agtatccgca	ctgctgggcc	720
gtatgccttc	agcggtaggt	tatcagccga	ccctggcgga	agagatgggc	gttctgcagg	780
aacgtatcac	ctccacaaaa	actggttcta	tcacctccg			819

<210> 365

<211> 802

<212> DNA

<213> *Shigella sonnei* ATCC 29930

<400> 365

gtaccgcgcg	tgtacgatgc	tcttgagggtg	caaaatggta	atgagcgtct	ggtgctggaa	60
gttcagcagc	agctcggcgg	cggtatcgtg	cgtaccatcg	caatgggttc	ctccgacggg	120
ctgcgtcgcg	gtctgggatgt	aaaagacctc	gaacacccga	tcgaagtccc	ggtaggtaaa	180
gcgactcttg	gccgtatcat	gaacgtactg	ggtgaaccgg	tcgacatgaa	aggcgagatc	240
ggtagaagaag	agcgttgggc	gattcacccg	cgagcacctt	cctacgaaga	gctgtcaaac	300
tctcaggaac	tgctggaaac	cggtatcaaa	gttatcgacc	tgatgtgtcc	gttcgctaag	360
ggcggtaaaag	ttggtctgtt	cggtggtgcg	ggtgtaggta	aaaccgtaaa	catgatggag	420
ctcattcgta	acatcgcgat	cgagcactcc	ggttactctg	tgtttgcggy	cgtagggtgaa	480
cgtactcgtg	agggtaacga	cttctaccac	gaaatgaccg	actccaacgt	tatcgacaaa	540
gtatccctgg	tgtatggcca	gatgaacgag	ccgccgggaa	accgtctgcy	cgttgctctg	600
accggtctga	ccatggctga	gaaattccgt	gacgaaggte	gtgacgttct	gctgttcgtt	660
gacaacatct	atcgttacac	cctggccggg	acggaagtat	ccgcactgct	gggccgtatg	720
ccttcagcgg	taggttatca	gccgaccctg	gcggaagaga	tgggcgttct	gcaggaaact	780
atcacctcca	ccaaaactgg	tt				802

<210> 366

<211> 785

<212> DNA

<213> *Staphylococcus aureus*

<400> 366

taacgccttg	gttattgatg	tgcctaaaga	agaagggtaca	atacaactaa	cattagaagt	60
tcgcgtgcaa	ttaggtgacg	acgttggtcg	tacaattgcy	atggattcaa	ctgatgggtg	120
ccaaagaggc	atggatgtaa	aagatacagg	caaagaaatt	agtgtacctg	ttggtgatga	180
aacattaggt	cgtgtattta	atgtactagg	tgaacaatt	gaccttaaag	aagaaattag	240

tgattctgtt	cgccgcgatc	ctatccatcg	tcaagcacca	gcattcgcg	aactttcaac	300
agaagttcaa	attttagaaa	caggtattaa	agtagtagat	ttactagcac	cttatattaa	360
aggtggtaaa	atcggattgt	tgggtggtgc	cggtgtaggt	aaaacagtat	taatccaaga	420
attaattaac	aacatcgctc	aagagcacgg	tggtatttct	gtattcgccg	gtgtaggtga	480
acgtactcgt	gaaggtaacg	atttatactt	cgaaatgagt	gatagtgggt	taattaagaa	540
aacagccatg	gtattcgggc	aaatgaatga	gccacctggt	gcacgtatgc	gtgttgcat	600
atctggttta	acaatggctg	aatttttccg	tgacgaacaa	ggtcaagacg	tattattatt	660
catcgataac	attttcagat	ttacacaagc	tggttctgag	gtatctgcat	tattaggtcg	720
tatgccttct	gcagtaggtt	accaaccaac	acttgctact	gaaatgggac	aattacaaga	780
acgta						785

<210> 367

<211> 843

<212> DNA

<213> *Staphylococcus auricularis* ATCC 33753

<400> 367

gaacataacg	aagtgcctaa	tattaataac	gccttagtac	tccgatgttga	aagagaagac	60
ggaacagtgt	ctttaacttt	agaagtagct	ttacaattag	gcgatgacgt	tggtcgtacc	120
attgcaatgg	attcaactga	tggtgttaaa	cgtggtaacg	aagtcaaaga	tactggtaat	180
agcattagcg	taccagtcgg	agacgaaact	ttaggacgtg	tcttcaacgt	tctaggtgaa	240
acaattgatt	tagaagataa	acttgatgat	tctgcgcgac	gtgaccctat	acatagagaa	300
gcgccagcgt	ttgatcaatt	atcaactcaa	gttgaaattt	tagaaacagg	aattaaagt	360
gttgacttat	tagcacctta	tattaaaggt	ggtaaagttg	gactcttcgg	tggtgccggt	420
gttggtaaaa	ccgttttaat	ccaagaatta	atcaacaaca	tcgctcaaga	acacgggtgt	480
atttcagctt	ttgccggtgt	aggtgaacgt	acacgtgaag	gtaacgactt	gtactatgaa	540
atgagcgaca	gtgggtgta	caagaaaaca	gccatggtct	tcggacaaat	gaacgaacca	600
cctggcgcac	gtatgcgtgt	tgctttatct	ggtttaacaa	tggttgata	tttccgtgat	660
gaacaaggac	aagacgtatt	gttattcatt	gacaatat	tccgtttcac	acaagccggt	720
tcagaagttt	ctgccttact	aggtcgttta	ccatcagccg	ttggttatca	acctacatta	780
tcaacagaaa	tgggacaatt	acaagaacgt	attacttcaa	caacaaaagg	atcagttact	840
tca						843

<210> 368

<211> 849

<212> DNA

<213> *Staphylococcus capitis* subsp. *capitis* ATCC 27840

<400> 368

gctttgaaca	taatgaagtt	cctgatatta	acaatgcctt	acacatcgaa	gttcctaaag	60
aagatagcac	acttcattta	actttagaag	ttgcacttca	attaggtgac	gatgtagtac	120
gtacaatcgc	aatggactca	actgacggcg	ttcaaagagg	tatggaagtt	aaagatacag	180
gtaaagatat	tagcgtacct	gttggtgatg	caactttagg	aagagtattt	aacgtattag	240
gagaacaact	cgatttagat	gaaaagattg	atgattcagt	acgtcgtgat	cctattcata	300
gacaggcacc	tggtctcgat	gaattatcta	ctaaagtaga	aatcttagaa	acaggtatca	360
aagtagtaga	cttatttagca	ccttacatta	aaggtggtaa	aattggatta	ttcgggtggt	420
ccggtgttgg	taagacagtt	ttaatccaag	aacttatcaa	taatatcgct	caagagcatg	480
gtggtatttc	agtattcgcc	ggtgttggtg	aacgtacacg	tgaaggtaac	gacctttact	540
atgaaatgag	cgatagtgg	gtaattaaga	aaacagcgat	ggtattcggt	cagatgaacg	600
agccacctgg	tgctcgtatg	cgtgttgcat	tatcaggttt	aacaatggca	gaatatttcc	660
gtgatgaaga	aggccaagac	gtattattat	tcattgataa	tatcttcaga	ttcacacaag	720
ctggttctga	agtttcagca	ttacttggac	gtatgccttc	agccgttggt	tatcaaccaa	780
cacttgctac	tgaatgggt	caattacaag	aacgtattag	ttcaactaat	aaaggttctg	840
ttacttcaa						849

<210> 369

<211> 830

<212> DNA

<213> *Staphylococcus cohnii* DSM 20260

<400> 369

gaagttccag	aaattaataa	tgcttaggtt	ctcgatatag	aaagagaaga	aggtactgtt	60
gaattaacgt	tagaagttgc	attacaactt	ggtgatgacg	tagtacgaac	aatcgcaatg	120

gattcaactg	atggtgttaa	acgtgggtaca	gaagtttagag	atagcggaaa	tagtatcagc	180
gtaccagttg	gtaatgaaac	attaggtaga	gtattttaatg	tattaggtga	tacgatagat	240
ttagatgaag	acatagatga	ctcagtgctg	cgtgacccaa	ttcatagaga	agcacctgca	300
tttgatcagt	tatctactaa	agttgaaatt	ttagaaacag	gtatcaaagt	cattgattta	360
ttagcaccat	atatcaaagg	tggtaaagtt	ggattattcg	gtggtgccgg	tggtggtaaa	420
actgtattaa	ttcaagaatt	aatcaataat	atcgctcaag	agcatgggtg	tatatccgta	480
tttgctgggtg	taggtgagcg	tacgcgtgaa	ggtaatgacc	tatactttga	aatgagtgat	540
agtgggtgta	ttaaaaagac	agctatggta	tttggacaaa	tgaacgaacc	acctggtgcg	600
cgtatgctgag	tagcactttc	tggtttaaca	atggctgaat	atctccggga	tgaacaagga	660
caagatgttc	tattattcat	agataacatc	tttagattta	ctcaagctgg	ttcagaagtt	720
tctgcgttat	taggtcgtat	gccttcagct	gttggttacc	aaccaacgtt	agcaactgaa	780
atggggacaat	tacaagaacg	tattacttct	acaactaaag	gttcagtaac		830

<210> 370
 <211> 787
 <212> DNA
 <213> *Staphylococcus epidermidis* ATCC 14990

<400> 370						
aataatgcat	tacacatcga	agttcctaaa	gaagatggag	cgcttcaatt	aacattagaa	60
gttgcacttc	aactaggtga	cgatgtagtt	cgtacaattg	caatggactc	aactgacggc	120
gttcaaagag	gaatggaagt	taaagataca	ggtagagaca	taagtgtacc	tgctcggtag	180
gtaactctag	gaagagtgtt	taacgtacta	ggagaaacta	ttgacttaga	tgaaaaaatt	240
gatgattcag	tacgacgtga	ccctatccat	agacaagctc	caggattcga	cgaattatca	300
acaaaagtag	aaatcctaga	aactgggtatt	aaagtagtag	acttattagc	accttacata	360
aaaggtggta	aaattggatt	atttggtggt	gccggtgtag	gtaaaaccgt	actaatccaa	420
gaacttatta	ataacatcgc	tcaagaacac	gggtggtatct	cagtattcgc	tggtggttgg	480
gaacgtacac	gtgaaggtaa	tgatctttac	tatgaaatga	gtgacagtgg	tggttatcaag	540
aaaactgcaa	tggtctttgg	tcaaatgaat	gagccacctg	gtgcacgtat	gcgtgtagca	600
ttatccggat	taacaatggc	cgaatatctc	cgagatgaag	aaggccaaga	tgtgttatta	660
ttcattgata	acatttttcag	attcactcaa	gctgggtcag	aagtttctgc	gttattaggt	720
cgtatgccat	cagctggttg	ttatcaacct	acacttgcta	cagaaatggg	tcaattacaa	780
gaacgta						787

<210> 371
 <211> 830
 <212> DNA
 <213> *Staphylococcus haemolyticus* ATCC 29970

<400> 371						
gaagtacctg	aaattaataa	cgccttaatc	atcgaagttc	ccaaagaaga	tggtactttt	60
gaattaacgc	ttgaagttgc	attacaacta	ggtgatgacg	ttgttcgtac	aattgctatg	120
gattcaacag	atggtgttca	acgtgggtatg	gaagttcaga	acactggaaa	agacatttca	180
gtaccagttg	gcgaagtaac	tttaggacgt	gtatttaacg	tattaggtga	cacaattgat	240
ttagaagata	aattagatgg	ttcagtaaga	cgtgatccaa	ttcatagaca	atcacctaac	300
tttgacgaat	tatctactga	agtagaaatt	cttgaaactg	gaatcaaagt	tgtagactta	360
ttagcaccat	acatcaaagg	tggtaaaatc	ggtctatttg	gtggtgccgg	tggttggtaaa	420
accgttttaa	tccaagaatt	gattaataat	atcgcacaa	aacatgggtg	tatctcagta	480
tttgctgggtg	taggtgaacg	tacacgtgaa	ggtaacgacc	tatattatga	aatgagagat	540
agtgggtgta	ttaaagaaaac	agcaatggta	tttgggtcaa	tgaacgagcc	acctggtgca	600
cgtatgcgtg	tggtcactttc	tgcatgaca	atggctgagt	atctccgtga	tgaacaagga	660
caagacgttc	tggtattcat	cgataacatt	ttcagattta	ctcaagcagg	ttcagaagta	720
tcagcattat	tggtgacgtat	gccttcagct	gtagggttatc	aacctacttt	agctacagaa	780
atgggtcaat	tacaagaacg	tattacatca	acgaataaag	gttcagtaac		830

<210> 372
 <211> 846
 <212> DNA
 <213> *Staphylococcus hominis* subsp. *hominis* ATCC 27844

<400> 372						
tcgaacataa	tgaagtcctt	gaaattaata	atgcctaat	tattgaagta	cccaaaaatg	60
atggcacatt	taaattaaca	ttagaagttg	cattgcaact	aggtgatgat	gttggttcgta	120

```

ctattgcaat ggattcaact gatggtgttc aacgtgggtat gcaagttgtg aatactggta 180
aagatattag tgttcctgta ggtgaagaaa cacttggacg tgtgtttaac gttttaggag 240
aaacaataga ttttaacgaa aaaatagata gttctgttag acgtgatcca attcatcgtc 300
gtcaacctaa ttttgatgaa ttatctactg aagtagaaat tcttgaaaca ggtattaaag 360
ttgtagactt attagcacct tatattaaag gtggttaagat tgggtttattc ggtggtgccc 420
gcgtaggtaa aactgtatta attcaagaat taatcaataa tatcgctcaa gaacatgggtg 480
gtatttctgt attcgctggt gtaggtgaac gtactcgtga aggtaacgat ttatactatg 540
aaatgagcga tagtggcggt atcaataaaa cagccatggt atttgggcaa atgaatgagc 600
cgccaggtgc gcgtatgcgt gttgctttat cagcattgac aatggctgaa tatttccgtg 660
atgaacaagg tcaagatgta cttttattca ttgacaatat tttccgcttt actcaagctg 720
gttctgaagt ttcagcatta ttaggacgta tgccttcagc tgtaggttat caacctacat 780
tagcaactga aatgggtcaa ttacaagaac gtattacatc tactaataaa ggttcagtca 840
cttcaa
846

```

<210> 373

<211> 846

<212> DNA

<213> Staphylococcus hominis strain CSG 175

<400> 373

```

tcgaacataa tgaagtcctt gaaattaata atgccctaata tattgaagta cccaaaaatg 60
atggcacatt caaattaaca ttagaagttg cattgcaact aggtgatgat gttgttcgta 120
ctattgcaat ggattcaact gatggtgttc aacgtgggtat gcaagttgtg aatactggta 180
aagatattag tgttcctgta ggtgaagaaa cacttggacg tgtgtttaac gttttaggag 240
aaacaataga ttttaacgaa aaaatagata gttctgttag acgtgatcca attcatcgtc 300
gtcaacctaa ttttgatgaa ttatctactg aagtagaaat tcttgaaaca ggtattaaag 360
ttgtagactt attagcacct tatattaaag gtggttaagat tgggtttattc ggtggtgccc 420
gcgtaggtaa aactgtatta attcaagaat taatcaataa tatcgctcaa gaacatgggtg 480
gtatttctgt attcgctggt gtaggtgaac gtactcgtga aggtaacgat ttatactatg 540
aaatgagcga tagtggcggt atcaataaaa cagccatggt atttgggcaa atgaatgagc 600
cgccaggtgc gcgtatgcgt gttgctttat cagcattgac aatggctgaa tatttccgtg 660
atgaacaagg tcaagatgta cttttattca ttgacaatat tttccgcttt actcaagctg 720
gttctgaagt ttcagcatta ttaggacgta tgccttcagc tgtaggttat caacctacat 780
tagcaactga aatgggtcaa ttacaagaac gtattacatc tactaataaa ggttcagtca 840
cttcaa
846

```

<210> 374

<211> 835

<212> DNA

<213> Staphylococcus lugdunensis ATCC 43809

<400> 374

```

ataatgaagt gcctgaaata aataatgcgc tcattgttga aattcctaaa agtgatacaa 60
caatcagttt aacacttgaa gttgctttgc aattaggtga cgatgttgta cgtactattg 120
caatggattc aactgatggc gttcaacgtg gtatggaagt tcaaaacaca ggtaaagaca 180
tcagtgtacc tgttggagat gaaacattag gaagagtatt taacgtttta ggagaatcta 240
ttgatttaga agaaaagcta gatgactctg tgcgtagaga tccaattcat agactagcac 300
ctaaatttga tgaattatct acagaagtag aaattcctga aactggtatt aaagttgttg 360
atattattagc accatatatt aaaggttgga aagttggatt gtttggtggt gccggagtag 420
gtaaaacggg attaatcaaa gaattaatca acaatattgc tcaagaacat ggtggtattt 480
ctgtgtttgc cggagtaggt gaacgtacac gtgaaggtaa tgacttatat tatgaaatga 540
gcgatagtgg cgtaattaag aaaacagcga tggattttgg ccaaataaat gaaccacctg 600
gtgcacgtat gagagttgcg ttatctgcct taacaatggc tgaatatttc cgtgacgagc 660
aaggacaaga cgtattgctg tttatcgata atatatccg ttttacacaa gcaggttcag 720
aagtatctgc attacttgga cgtatgccat ctgccgttgg ttatcaacca acattggcta 780
cagaaatggg acaattgcaa gaaagaatta catctacaaa taaaggttct gtaaac 835

```

<210> 375

<211> 842

<212> DNA

<213> Staphylococcus saprophyticus ATCC 15305

<400> 375

gagcacaatg	aagttccaga	aattaacaat	gccttagtgc	tagacgttga	aagagatgaa	60
ggtacagtat	ctcttacatt	agaagtggca	ttacaacttg	gcgatgatgt	cgtacgtaca	120
atttgcaatgg	attctactga	tgggtgttaa	cgtgggtacag	aagttcgaga	tagcgggagat	180
agcatcagtg	ttccagttgg	tgatgctacg	ttaggacgtg	tgtttaatgt	tcttggtgat	240
acaattgact	tagacgagaa	gcttgatact	tctgtcaaac	gtgatccaat	tcatagagaa	300
gcacctgcat	tcgatcaatt	atcaacaaaa	ggtgaaatct	tagaaacagg	tattaaagta	360
attgattttac	ttgcaccata	tattaaaggt	ggtaaaatcg	gtttattcgg	tggcgctggg	420
gtaggtaaaa	cagtattaat	tcaagaatta	attaataata	tagctcaaga	acatgggtgg	480
atttcagtat	ttgccggcgt	aggtgaacgt	acgcgtgaag	gtaatgactt	atactacgaa	540
atgagtata	gtgggtgttat	taagaaaaca	gctatgggtc	tcggacaaat	gaatgagcca	600
cctgggtgcgc	gtatgcgtgt	tgctttatca	ggcttaacaa	tggctgaaca	cttcctgat	660
gtacaaggac	aagatgtttt	actattttat	gataacatat	tcagattttac	gcaagctggg	720
tcagaagtat	cagcactatt	aggtcgtatg	ccatcagccg	ttgggttatca	acctaccctt	780
gctactgaaa	tgggtcaatt	acaagaacgt	attacatcaa	caactaaagg	atctgtaacg	840
tc						842

<210> 376

<211> 842

<212> DNA

<213> Staphylococcus simulans ATCC 27848

<400> 376

tgtgaactg	cctaagatta	ataacgcatt	agtgcctagat	gtacctaaaga	aagatggcac	60
gactgaatct	cttacattag	aagtagcact	tgaattaggc	gacgacgtag	ttagaactat	120
cgccatggac	tctacagacg	gaattaaacg	tgggtgacgac	gttaaagaca	ctgggtcggtcc	180
aatcagtgta	cctgtcgggtg	aagatacgtt	aggaagagta	tttaacgttt	taggtgatcc	240
aatcgataat	gatggaccga	tttctgaatc	agttccacgt	gaaccaattc	atagacaacc	300
acctaaattt	gatgaattat	caacaaaagt	tgaactactt	gaaactggta	tcaaagtagt	360
agacttatta	gcaccatata	tcaaagggtg	ttaaagttgg	ttattcgggtg	gtgccggaaca	420
aggtaaaact	gtattaatcc	aagaattaat	taataacatc	gctcaagaac	acggcggtat	480
ttcagtatcc	gcagggtgttg	gtgaacgtac	acgtgaagg	aacgacttgt	acttcgaaat	540
gagcgacagt	ggtgttatca	agaaaacagc	gatgggtattc	ggacaaatga	acgaaccacc	600
tgggtgcacgt	atgcgtgtag	ctttatcagg	tttaacaatg	gctgaatact	tccgtgatgt	660
taaaggacaa	gacgttcttt	tattcatcga	taacattttc	cgcttcacac	aagcaggttc	720
tgaggatatca	gcattgtctt	gccgtatgcc	atcagccgtt	ggttaccaac	caacattggc	780
aacagaaatg	ggtcaattac	aagaacgtat	cacttctaca	atgaaagggt	ctatcacatc	840
ta						842

<210> 377

<211> 841

<212> DNA

<213> Staphylococcus warneri ATCC 27836

<400> 377

cataacgaag	tccctgatat	taataatgcc	cttattattg	aagttccaaa	agaagatgga	60
acgttaaact	taacattaga	agttgcacta	caattagggtg	atgatgttgt	acgtacaatt	120
gcaatggatt	caactgatgg	tgttcaaaga	ggcatggatg	ttaaagacac	aggtaaagat	180
attagtgtac	ctgtaggcga	tgaacgcgtt	ggaagagtgt	ttaatgtact	aggtgaaaca	240
attgactttg	aagagaaaaat	tgatgattcc	gtacgtcgtg	atccaatcca	tagacaatca	300
ccaggtttctg	atgaattatc	tactgaagta	gaaatcttag	aaacagggtat	taaagtagta	360
gacttattag	caccttacat	taaagggtgg	aaagttggac	tattcgggtg	tgccggagta	420
ggtaaaaaccg	ttttaatcca	agaattaatt	aacaatatgt	cacaagaaca	tgggtggtatt	480
tcagtattcg	cgggtgtagg	tgaacgtact	cgtgaaggta	atgattttata	ctatgaaatg	540
agtgatagt	gtgtaattaa	gaaaacagcg	atgggtatttg	gacaaatgaa	tgaaccacct	600
ggcgcacgta	tgcgtgtagc	tttatctgg	ttactatagg	ctgaatactt	ccgtgatgaa	660
caaggacaag	acgtactttt	attcatcgat	aatattttca	gatttacaca	agctgggttct	720
gaagtttctg	cattacttgg	tcgtatgcct	tcagccgttg	gttaccacac	aacattagca	780
actgaaatgg	gtcaattaca	agaacgaatt	acatctacaa	ataaagggtc	tgtaacatct	840
a						841

<210> 378

<211> 846

<212> DNA

<213> *Streptococcus acidominimus* ATCC 51726

<400> 378

```
tttaacacga atgaaccgct tcttgagata aataatgcac ttgttggttta caaagacagt 60
gagaaaaaac ataaaatcgt tcttgaagta gctcttgaac ttggtgaagg cctcgttcgt 120
accattgcta tggaatcaac tgatgggttg acacgtgggc tagaagttct tgatacaggc 180
cgtgcaatca gtgtaccagt tggtaaagaa acgcttggac gtgtcttcaa cgttcttggg 240
gatgctatcg atcttgaaga accatttggga gaagatgcag aacgtcacc cttcataaag 300
agtgccecaa cttttgatga attatcaacg tcaacagaaa tccttgaaac agggattaaa 360
gttatcgacc tacttgcccc ttacttaaaa ggagggaagg ttggactttt cgggtggtgcc 420
ggagttggta agaccgttct tatccaagag ttgattcata acattgctca agagcatggg 480
ggtatttcag tatttaccgg agttggtgaa cgtacacgtg aaggtaatga cctctattgg 540
gaaatgaaag aatcaggcgt tattgaaaaa acagctatgg tatttgggtc gatgaatgag 600
ccacctgggt cacgtatgct tgtagccctt actgggttga caatcgctga atatttccgt 660
gatgttgaag gacaggacgt gcttctcttt attgataaca tttttcgttt cacacaagca 720
ggttctgaag tttcagctct tcttggacgt atgccatcag ccgttggtta tcaaccaacc 780
ttggcaactg aaatgggtca attgcaagaa cgtatcacgt caactaaaaa aggttctgtt 840
acatca
```

<210> 379

<211> 846

<212> DNA

<213> *Streptococcus agalactiae* ATCC 12403

<400> 379

```
ttgcaagtgg cgacaaactt cctgagatta ataatgcatt gattgtctat aaaaatggcg 60
ataagtcaca aaaagtagta cttgaagtta ctcttgaact tggtgacggc ctcgttcgta 120
caatcgctat ggaatcaact gatgggctta cacgtgggtt ggaagtatta gatactgggc 180
gcgcaattag tgtgccggtt ggtaaggata ctttgggtcg tgtcttcaac gttcttggag 240
atgctattga ctttgaagag ccttttgcag aagatgcaga acgtcaacca atccataaaa 300
aagcaccatc gtttgatgaa ttatcaacat catcagaaat cttagaaaca ggtattaaag 360
ttattgactt attagcacct tacttaaaaag gtggtaaagt tggacttttc ggtggtgcag 420
gtgttggttaa aaccgttctt attcaagaat taatccacaa catcgcccaa gaacatgggtg 480
gtatttcagt atttactggg gtaggagaac gtactcgtga agggaatgac ctttattggg 540
aaatgaaaga atctggcggt attgaaaaaa cggctatggg ctttgggtcaa atgaatgaac 600
caccaggagc acgtatgcgt gtggcactta ctgggtcttac aatagctgag tacttccgtg 660
atgtagaagg acaagatgtg cttctcttca ttgataatat cttccgtttc acacaagctg 720
ggtcagaagt gtcagcgctt ttaggtcgta tgccttcagc cgttggttat caaccaacac 780
ttgctacaga aatgggacaa ttacaagagc gtatcacttc aactaaaaaa ggttctgtta 840
cctcaa
```

<210> 380

<211> 846

<212> DNA

<213> *Streptococcus agalactiae* ATCC 13813

<400> 380

```
ttgcaagtgg cgacaaactt cctgagatta ataatgcatt gattgtctat aaaaatggcg 60
ataagtcaca aaaagtagta cttgaagtta ctcttgaact tggtgacggc ctcgttcgta 120
caatcgctat ggaatcaact gatgggctta cacgtgggtt ggaagtatta gatactgggc 180
gcgcaattag tgtgccggtt ggtaaggata ctttgggtcg tgtcttcaac gttcttggag 240
atgctattga tcttgaagag ccttttgcag aagatgcaga acgtcaacca atccataaaa 300
aagcaccatc gtttgatgaa ttatcaacat catcagaaat cttagaaact ggtattaaag 360
ttattgactt attagcacct tacttaaaaag gtggtaaagt tggacttttc ggtggtgcgg 420
gtgttggttaa aaccgttctt attcaagaat taatccacaa catcgcccaa gaacatgggtg 480
gtatttcagt atttactggg gtaggagaac gtactcgtga agggaatgac ctttattggg 540
aaatgaaaga atctggcggt attgaaaaaa cggctatggg ctttgggtcaa atgaatgaac 600
caccaggagc acgtatgcgt gtggcactta ctgggtcttac aatagctgag tacttccgtg 660
atgtagaagg acaagatgtg cttctcttca ttgataatat cttccgtttc acacaagctg 720
ggtcagaagt gtcagcgctt ttaggtcgta tgccttcagc cgttggttat caaccaacac 780
ttgctacaga aatgggacaa ttacaagagc gtatcacttc aactaaaaaa ggttctgtta 840
cctcaa
```

<210> 381
<211> 845
<212> DNA
<213> Streptococcus agalactiae ATCC 12973

<400> 381
ttgcaagtgg cgacaaactt cctgagatta ataatgcatt gattgtctat aaaaatggcg 60
ataagtcaca aaaagtagta cttgaagttg ctcttgaact tggtagcggc ctcgttcgta 120
caatcgctat ggaatcaact gatgggctta cacgtggttt ggaagtatta gatactgggc 180
gtgcaattag tgtgccggtt ggtaaggata ctttgggtcg tgtcttcaac gttcttggag 240
atgctattga ccttgaagag ccttttgcag aagatgcaga acgtcaacca atccataaaa 300
aagcaccatc atttgatgaa ttatcaacat catcagaaat cttagaaaca ggtattaaag 360
ttattgactt attagcacct tacttaaaag gtggtaaagt tggacttttc ggtggtgcgg 420
gtgttggttaa aaccgttctt attcaagaat taatccacaa catcgcccaa gaacatggtg 480
gtatttcagt atttactggt gtaggagaac gtactcgtga agggaatgac ctttattggg 540
aaatgaaaga atctggcggt attgaaaaaa cggctatggt ctttgggtcaa atgaatgaac 600
caccaggagc acgtatgcgt gtggcactta ctggctctac aatagctgag tacttccgtg 660
atgtagaagg acaagatgtg cttctcttca ttgataatat cttccgtttc acacaagctg 720
ggtcagaagt gtcagcgctt ttaggtcgta tgccttcagc cgttgggttat caaccaacac 780
ttgctacaga aatgggacaa ttacaagagc gtatcacttc aactaaaaaa ggttctgtta 840
cctca 845

<210> 382
<211> 845
<212> DNA
<213> Streptococcus agalactiae ATCC 27591

<400> 382
ttgcaagtgg cgacaaactt cctgagatta ataatgcatt gattgtctat aaaaatggcg 60
ataagtcaca aaaagtagta cttgaagttg ctcttgaact tggtagcggc ctcgttcgta 120
caatcgctat ggaatcaact gatgggctta cacgtggttt ggaagtatta gatactgggc 180
gcgcaattag tgtgccggtt ggtaaggata ctttgggtcg tgtcttcaac gttcttggag 240
atgctattga ccttgaagag ccttttgcag aagatgcaga acgtcaacca atccataaaa 300
aagcaccatc gtttgatgaa ttatcaacat catcagaaat cttagaaact ggtattaaag 360
ttattgactt attagcacct tacttaaaag gtggtaaagt tggacttttc ggtggtgcag 420
gtgttggttaa aaccgttctt attcaagaat taatccacaa catcgcccaa gaacatggtg 480
gtatttcagt atttactggt gtaggagaac gtactcgtga agggaatgac ctttattggg 540
aaatgaaaga atctggcggt attgaaaaaa cggctatggt ctttgggtcaa atgaatgaac 600
caccaggagc acgtatgcgt gtggcactta ctggctctac aatagctgag tacttccgtg 660
atgtagaagg acaagatgtg cttctcttca ttgataatat cttccgtttc acacaagctg 720
ggtcagaagt gtcagcgctt ttaggtcgta tgccttcagc cgttgggttat caaccaacac 780
ttgctacaga aatgggacaa ttacaagagc gtatcacttc aactaaaaaa ggttctgtta 840
catca 845

<210> 383
<211> 845
<212> DNA
<213> Streptococcus agalactiae strain CDCss-1073

<400> 383
ttgcaagtgg cgacaaactt cctgagatta ataatgcatt gattgtctat aaaaatggcg 60
ataagtcaca aaaagtagta cttgaagttg ctcttgaact tggtagcggc ctcgttcgta 120
caatcgctat ggaatcaact gatgggctta cacgtggttt ggaagtatta gatactgggc 180
gcgcaattag tgtgccggtt ggtaaggata ctttgggtcg tgtcttcaac gttcttggag 240
atgctattga ccttgaagag ccttttgcag aagatgcaga acgtcaacca atccataaaa 300
aagcaccatc gtttgatgaa ttatcaacat catcagaaat cttagaaact ggtattaaag 360
ttattgactt attagcacct tacttaaaag gtggtaaagt tggacttttc ggtggtgcag 420
gtgttggttaa aaccgttctt attcaagaat taatccacaa catcgcccaa gaacatggtg 480
gtatttcagt atttactggt gtaggagaac gtactcgtga agggaatgac ctttattggg 540
aaatgaaaga atctggcggt attgaaaaaa cggctatggt ctttgggtcaa atgaatgaac 600
caccaggagc acgtatgcgt gtggcactta ctggctctac aatagctgag tacttccgtg 660
atgtagaagg acaagatgtg cttctcttca ttgataatat cttccgtttc acacaagctg 720
ggtcagaagt gtcagcgctt ttaggtcgta tgccttcagc cgttgggttat caaccaacac 780
ttgctacaga aatgggacaa ttacaagagc gtatcacttc aactaaaaaa ggttctgtta 840

catca

845

<210> 384
<211> 845
<212> DNA
<213> Streptococcus dysgalactiae ATCC 43078

```
<400> 384
ttgctagtgg ggacaaactt ccagagatta ataatgcatt gattgtttat aaagatagtg 60
ataaaaagca aaaaatcgct cttgaagttg ctctggaact tggtagcggt atggtgcgaa 120
caatcgctat ggaatcaact gatgggctta cacgtgggtt agaagttctt gacactgggtc 180
gtgcgattag tgtaccagta ggtaaagaaa ctttgggacg cgtctttaat gtacttggag 240
aaaccattga cttggaagaa ccatttgcag aagacgttga ccgtcagcca atccataaaa 300
aagcaccatc gtttgatgaa ttatcaacat catcagaaat tcttgaaaact ggtatcaagg 360
taattgacct tcttgcccct taccttaaag gtggtaaagt tggacttttc gggggtgccg 420
gagttggtaa gactgtcctt atccaagaat taatccacaa tatcgcccaa gaacacggag 480
gtatttcagt atttaccggt gttggtgagc gaacacgtga aggaaatgac ctttactggg 540
aaatgaaaga atcaggcggt attgagaaaa ctgccatggt ttttggtcag atgaatgagc 600
cgcttggggc acgtatgcgt gtagccctta ctggtttaac cattgctgag tatttccgtg 660
atgtagaagg ccaagatggt ttgctcttta ttgataatat cttccgtttc actcaggcag 720
gttcagaagt atcagccctc ttaggcctga tgccctctgc tgttggttac caaccgaccc 780
ttgctactga aatgggacaa ttgcaagaac gtattacgtc aactcaaaaa ggatctgtta 840
cttct
```

<210> 385
<211> 846
<212> DNA
<213> Streptococcus equi subsp. equi ATCC 9528

```
<400> 385
ttgctagtgg ggacaaacta ccagagatta ataatgcgtt gatagtttat aaagatggcg 60
ataaaaagca aaaaatcggt ctctgaggtt ccctagagct tggagacggt atggtacgta 120
caattgctat ggaatcaacc gatgggctta cacgtggatt agaggttctt gatactgggtc 180
gtgccattag tgtaccagtt ggtaaagaga ctctaggtcg tgttttcaac gttcttgggtg 240
aaaccatcga cctagaagca ccatttgcag atgatgttaa tcgtgaaccg atccataaaa 300
aagcaccagc ctttgatgaa ttgtcaacat catcagaaat tcttgaaaca ggtatcaagg 360
ttattgacct gcttgcccct tacttaaagg gtggtaaagt cggctctttc ggtggtgccg 420
gagttggtaa aaccgttctt atccaagaat taatccacaa tatcgctcaa gagcatgggtg 480
ggatctcggt atttaccggt gttggtgagc gtacgcgtga aggaaatgac ctttactggg 540
aaatgaagga atcaggcggt attgaaaaaa cagccatggt ttttggtcag atgaatgaac 600
caccaggagc ccgtatgcgt gttgccttga ccggcttgac aattgctgaa tatttccgag 660
atgttgaagg ccaagacgtc ctgctcttca ttgacaatat tttccgcttt actcaagcag 720
gctcagaggt atcagccctt ctagggtcgt tgcccttcagc cgttggttac cagccaacac 780
ttgccactga aatgggacaa ttgcaagagc gtatcacctc aacgaaaaaa ggctctgtta 840
cctcta
```

<210> 386
<211> 843
<212> DNA
<213> Streptococcus anginosus ATCC 27335

```
<400> 386
gcagctgggtg ataaacttcc tgagattaac aatgcattgg tcgtttatac tgatgaacaa 60
aagtctaaac gtatcggtgt cgaagtagct cttgaacttg gagaagggtg ggttcgtacc 120
attgccatgg aatctactga tggattgact cgtggactag aagttctgga cacttggctg 180
ccaatcagcg ttctgtttgg taaagatacc cttggacgtg tctttaacgt tcttgggtgat 240
accattgact tggaagcacc ttttgcagac gatgcagagc gtgaaccaat tcacaaaaaa 300
gcaccaactt tcgatgaatt gtcaacatct actgaaatcc ttgaaacagg gattaaagtt 360
atcgactttgc tagccccctta ccttaagggt ggtaaagtgc gactcttcgg tgggtccggg 420
gttggtaaaaa ccgttcttat tcaagagttg attcacaaca ttgcccaga gacacgtggt 480
atttccgtgt ttacaggtgt tgggtgaacgt acacgtgaag gtaatgacct ttactgggaa 540
atgaaagaat ctggcggttat cgagaaaaca gccatggtct tcggtcaaat gaacgaacca 600
cctggagcac gtatgcgtgt tgcccttact ggtttgacaa ttgcggaata cttccgtgat 660
```

gtcgaggggtc	aagacgttct	tctctttcatc	gataacatct	tccgttttcac	tcaagcaggt	720
tctgaggttt	ctgcccttct	tggtcgtatg	ccatcagccg	ttgggttacca	acctacactt	780
gctactgaaa	tgggtcaatt	gcaagaacgt	atcacatcaa	ctaaaaaagg	ttctgtttaca	840
tct						843

<210> 387

<211> 843

<212> DNA

<213> Streptococcus salivarius ATCC 7073

<400> 387

gcagctgggtg	ataaacttcc	tgagattaac	aatgcattgg	tcgttttatac	tgatgaacaa	60
aagtctaaac	gtatcgtgct	cgaagtagct	cttgaacttg	gagaaggtgt	ggttcgtacc	120
attgccatgg	aatctactga	tggattgact	cgtggactag	aagttctgga	cactgggtcgt	180
ccaatcagcg	ttcctgttgg	taaagatacc	cttggacgtg	tctttaacgt	tcttgggtgat	240
accattgact	tgggaagcacc	ttttgcagac	gatgcagagc	gtgaaccaat	tcacaaaaaa	300
gcaccaactt	tcgatgaatt	gtcaacatct	actgaaatcc	ttgaaacagg	gattaaagtt	360
atcgacttgc	tagccccctta	ccttaagggt	ggtaaagtgc	gactcttcgg	tggtgccgggt	420
gttggttaaaa	cggttcttat	tcaagagttg	attcacaaca	ttgcccaga	gcacgggtggt	480
atttcctgtg	ttacagggtg	tggtgaacgt	acacgtgaag	gtaatgacct	ttactgggaa	540
atgaaagaat	ctggcggttat	cgagaaaaca	gccatggtct	tcggtcaa	gaacgaacca	600
cctggagcac	gtatgcgtgt	tgcccttact	ggtttgacaa	ttgcggaata	cttcctgat	660
gtcgaggggtc	aagacgttct	tctctttcatc	gataacatct	tccgttttcac	tcaagcaggt	720
tctgaggttt	ctgcccttct	tggtcgtatg	ccatcagccg	ttgggttacca	acctacactt	780
gctactgaaa	tgggtcaatt	gcaagaacgt	atcacatcaa	ctaaaaaagg	ttctgtttaca	840
tct						843

<210> 388

<211> 841

<212> DNA

<213> Streptococcus suis ATCC 43765

<400> 388

ttgcagcaga	agataaactt	cctgagatta	acaacgcact	cgttgtatat	aaaaatgatg	60
attccaaaca	aaaagtcgtg	cttgaagtgg	ctttggaact	tggtgatggc	gttgtacgga	120
ccattgccat	ggaatcaacg	gatggattga	cacgtgggat	ggaagtcttc	gatacaggtc	180
gtcccatctc	tgttccagtc	ggtaaagaaa	cgctgggtcg	tgtcttcaat	gtgttggggag	240
ataccattga	ccttgaagag	tcttttccgg	cagattttga	acgtgagcct	atccataaga	300
aagcccggtc	ttttgacgaa	ttatctactt	caagcgaaat	tttggaaaca	gggattaagg	360
ttatcgacct	cctagcacct	tatctaaaag	gtggtaagg	tggtctcttc	ggtgggtgctg	420
gtgttggtaa	aaccgttctt	atccaagaat	tgattcacaa	tattgcccac	gaacacgggtg	480
gtatctctgt	atttaccgga	ggttggcgag	gtacccgtga	agggaaacgat	ctttactggg	540
aaatgaaaga	atcaggtggt	attgaaaaaa	cggccatggt	atttggtcag	atgaatgagc	600
caccaggagc	ccgtatgcgt	ggtgtcttta	ctgggttgac	tattgcggaa	tacttccgtg	660
atgtggaagg	gcaggatggt	cttctgttca	tcgataatat	cttcggtttc	acacaggctg	720
gttcagaagt	gtctgccctc	ttgggtcgta	tgccatcagc	cgttgggtat	cagccaacac	780
ttgcgacgga	gatgggacaa	ttgcaggagc	gtattacctc	aaccaagaag	ggttctgtta	840
c						841

<210> 389

<211> 844

<212> DNA

<213> Streptococcus uberis ATCC 19436

<400> 389

gcaaacgggtg	aaaaattacc	agagattaat	aatgcattga	tagttttataa	aggtagcgat	60
aaaaaacaaa	agattgttct	tgaagttgct	ttggaacttg	gggacggaat	ggttcgtaca	120
atcgctatgg	aatcaactga	tgggcttaca	cgtggattag	aagttttaga	tactggccgt	180
gccattagtg	taccagtcgg	aaaagaaaact	ttgggtcggtg	ttttcaatgt	gcttgggtgaa	240
accattgatt	tggatgaacc	atttgccgct	gatgctgcaa	gagaacccat	ccataaaaaa	300
gccccagcat	ttgatgaact	atcaacgtct	tcagaaattc	ttgaaaccgg	aataaaagtt	360
attgacttat	tagccccctta	tctcaaaagg	ggtaaagttg	gtttatttgg	tggtgccgga	420
gtaggtaaaa	cggttttta	tcaagaatta	attcataata	ttgcacaaga	acatgggtggt	480

atttcagtat	ttaccgggtgt	tggtgaaaga	actcgtgaag	gtaatgacct	ttattgggaa	540
atgaaagaat	ctggcggttat	tgaaaaaaca	gccatgggtat	ttggacaaat	gaacgaacca	600
ccaggagcac	gtatgcgcgt	tgctttaaca	ggtttaacca	ttgctgaata	tttccgggat	660
ggtgaaggtc	aagatgtttt	gctctttatt	gacaacattt	tccgtttcac	gcaagctggg	720
tcagaagttt	cagccctatt	gggtcgtatg	ccttcagcgg	taggatacca	accaacactt	780
gctaccgaaa	tgggacaatt	gcaagaaaga	attacctcaa	ctaacaaggg	atctgttact	840
tcta						844

<210> 390

<211> 846

<212> DNA

<213> *Tatumella ptyseos* ATCC 33301

<400> 390

ttccctcagg	acgctgtacc	acaggtgtac	aacgctcttg	agggtgaaaa	tggtgatacc	60
cgtctgggtgc	tggaagttca	gcagcagctg	ggcggtgggtg	tcgttcgtac	gattgcaatg	120
ggaacctctg	acggcctgaa	acgtggcctt	aagggtgaccg	atctgcaaaa	accgattcag	180
gtaccgggtcg	gtaaagcgac	gctgggcccgt	atcatgaacg	tactgggtca	gccaatcgat	240
atgaaaggcg	acctgaagaa	cgaagatggg	agcaatgttg	agggtgaactc	tattcaccgt	300
gcagcgccaa	gctacgaaga	actggctaac	tctactgagc	tgctggaaac	gggtatcaag	360
gttatcgacc	tgatctgtcc	gtttgcaaaa	ggcggttaaag	tgggtctgtt	cggtgggtgcg	420
gggtgtaggta	agaccgtcaa	catgatggaa	ctgatccgta	acatcgctat	cgagcactct	480
ggttactctg	tattttgcagg	gggtgggtgag	cgtaccctg	aaggtaacga	cttctaccac	540
gaaatgaccg	agtctaactg	tctggataaa	gttgctctgg	tttatggcca	gatgaacgag	600
ccaccaggaa	accgtctg	cggtgcgctg	accggtctga	ctatggctga	aaaattccgt	660
gacgaaggcc	gtgacgtact	gctgttcggt	gataacatct	atcggttatac	cctggccggg	720
actgaagttt	cagcactgct	gggtcgtatg	ccttctgcgg	taggttatca	gccaacactg	780
gccgaagaaa	tgggtgttct	tcaggaacgt	atcacgtcaa	ccaaaaccgg	ttcaatcact	840
tccgta						846

<210> 391

<211> 829

<212> DNA

<213> *Trabulsiella guamensis* ATCC 49490

<400> 391

ttccctcagg	atgccgtacc	gcgcgtgtac	gatgctcttg	aggttatgaa	tggtagttag	60
cgtctgggtgc	tggaagttca	gcagcagctc	gggtgggtgta	tcgtacgtac	tatcgccatg	120
ggttcttccg	acggctctgcg	tcgtgggtctg	gatgtaaaaag	atctcgagca	tccgatcgaa	180
gtcccggtag	gtaaagcaac	gctgggtcgt	atcatgaacg	tgctgggtca	gccgatcgat	240
atgaaaggcg	acatcggcga	agaagagcgt	tgggctatcc	accgcgcagc	accgtccctac	300
gaagagcttg	ccagctctca	ggaactgctg	gaaaccggca	tcaaagttat	cgacctgatg	360
tgtccgttctg	cgaaggcg	taaagtcggt	ctgttcggtg	gtgcgggtgt	aggtaaaacc	420
gtaaacatga	tggagctgat	tcgtaacatc	gcgatcgagc	actccggtta	ctctgtgttt	480
gcgggctg	gtgaacgtac	tcgtgagggt	aacgacttct	accacgaaat	gaccgactcc	540
aacgttctg	acaaagtatc	cctgggtgat	ggacagatga	acgagccgcc	gggaaaccgt	600
ctgcgcgttg	caactgaccg	tctgaccatg	gctgagaagt	tccgtgacga	aggctcgtgac	660
gttctgctgt	tcgtcgataa	catctaccgt	tacaccctgg	cgggtactga	agtatctgca	720
ctgctggg	gtatgccttc	agcggtaggt	taccagccga	ccctggcgga	agagatgggt	780
gttcttcagg	aacgtatcac	ctcaacccaa	accggttcta	tcacctccg		829

<210> 392

<211> 835

<212> DNA

<213> *Yersinia bercovieri* ATCC 43970

<400> 392

cgaattcccc	caagacgctg	tacccaaaagt	gtacaacgcc	cttgagggtg	aaggcacagc	60
tcagaagctg	gtgctggaag	ttcagcaaca	gctggg	gggtgtgttc	gtgtatcgc	120
aatgggctct	tccgatggc	tgagcccg	gttgaaagtc	atcaacctgg	aacacccaat	180
tgaagtgcg	gtgggtaaat	caactctggg	ccgtatcatg	aacgtattgg	gtgacccaat	240
cgacatgaaa	ggctctatcg	gtgaagaaga	gcgttgggca	atccaccgcg	aagcgccttc	300
ttacgaagag	cttgccagct	cgcaagatct	gttagaaacc	ggtatcaagg	taatggatct	360

```
gatttgtccg ttcgctaagg gcggttaaagt cggctctgttc ggtgggtgcgg gtgtgggtaaa 420
aacagtcacac atgatggagc tgattcgttaa tattgctgatt gagcactcag gttattctgt 480
atttgcgggt gtgggtgagc gtactcgtga gggtaacgac ttctaccacg agatgactga 540
ctccaacgtt ctggacaaaag tatccttggt ttatggccag atgaatgagc caccaggtaa 600
ccgtctgcgc gttgactga ccggttgac catggcggag aaattccgtg atgaaggctg 660
tgatgtactg ttattcatcg ataacatcta tcgttatacc ctggccggta cagaggatatc 720
tgcactgcta ggtcgtatgc catcagcggg aggtatcag ccaacgctgg cagaagagat 780
gggtgtgttg caggaacgta tcacttccac caagacgggt tcaatcacct ccgta 835
```

<210> 393
<211> 812
<212> DNA
<213> *Yersinia enterocolitica* ATCC 9610

```
<400> 393
gctgtaccaa aagtgtacaa cgcccttgag gttgaaggcg cagctgagaa gctgggtgctg 60
gaagttcagc aacagctggg cgggtggtgtt gttcgttgta tcgcaatggg ctcttccgat 120
ggtctgagcc gtgggttgaa agtcatcaac ctggaacacc caattgaagt gccgtggtggc 180
aagtcaactc tgggccgtat catgaacgta ttgggtgacc caatcgacat gaaaggctcct 240
atcggcgaaag aagagcgttg ggcaatccat cgtgaagcgc cttcttacga agatcttgcc 300
agctcgcaag acttgtaga aaccggtatc aaggtaatgg acttgatttg tccgttcgct 360
aagggcggta aagtcggtct gttcgggtgtt gcgggtgtag gtaaaacggg aaacatgatg 420
gagcttattc gtaacattgc gattgagcac tcagggttatt ccgtatttgc tggcgtgggt 480
gagcgtactc gtgagggtaa cgacttctac caccgagatga ctgactccaa cgttctggac 540
aaagtatcct tggtttatgg ccaaatgaat gagccaccag gtaaccgtct gcgcgttgca 600
ctgaccggct tgaccatggc ggagaaattc cgtgatgaag gtcgtgacgt attgctgttc 660
atcgataaca tctatcgcta taccttagcc ggtacggaag tttccgcact gctgggtcgt 720
atgccatctg ccgtagggtta ccagccaacg ctggcagaag agatgggtgt gttgcaggaa 780
cgtattactt ccaccaagac gggttcaatc ac 812
```

<210> 394
<211> 802
<212> DNA
<213> *Yersinia frederiksenii* ATCC 33641

```
<400> 394
aaagtgtaca acgccccttga ggttgaagggt actgctgaga agttagtact ggaagttcag 60
caacagctgg gcggtggtgt tgctcgttgt atcgccatgg gctcttccga tggtttgagc 120
cgcggttgta aagttgtcaa cctggaacac ccaattgaag taccggttgg taaatcaact 180
ctgggccgta tcatgaacgt attgggtgac ccaatcgaca tgaaagggtcc tatcggtgaa 240
gaagagcgtt gggcaatcca ccgcgaagcg ccttcttacg aagagcttgc cagctcgcaa 300
gatctgttag aaaccggtat caaggtaatg gatctgattt gcccgttcgc taaaggcggg 360
aaagtcggtc tggtcggtgg tgcggtgtga ggtaaaacgg taaacatgat ggagctgatc 420
cgtaatatcg cgatcgagca ctcagggttat tccgtatttg cgggtgttgg tgaacgtacc 480
cgtgagggtg acgacttcta ccacgagatg actgactcca acgttctgga caaagtatcc 540
ttggtttatg gccagatgaa tgagccacca ggtaaccgtc ttcgcgttgc actgaccggg 600
ctgaccatgg cggagaaatt ccgtgatgaa ggtcgtgacg tattgctgtt catcgataac 660
atctatcggt ataccttggc cggtagcgaa gtatccgcac tgctgggtcg tatgccatct 720
gcggtaggct atcagccaac gctggcagaa gagatgggtg tggtgcagga acgtattact 780
tccaccaaga cgggttcaat ca 802
```

<210> 395
<211> 806
<212> DNA
<213> *Yersinia intermedia* ATCC 29909

```
<400> 395
gctgtaccaa gagtgtacaa cgcccttgag gttgaaggca ctgctgagaa gctgggtgctg 60
gaagttcagc aacagctagg cgggtggtgtt gttcgttgta tcgcaatggg ctcttccgat 120
ggtctgagcc gcgggttgaa agtcatcaac ctggaacacc caattgaagt gccggttggg 180
aaatcaactc tgggccgtat catgaacgta ttgggtgacc caatcgacat gaaaggctcct 240
atcgggtgaag aagagcgttg ggcaatccac ccggaagcgc cttcttacga agagcttgcc 300
agctcacaag atttgtaga aaccggtatc aaagtaatgg acttgatttg cccgttcgct 360
```

```
aagggcggtgta aagtgggtct gttcgggtggt gcggggtgtag gtaaaacagt aaacatgatg 420
gagcttatttc gtaacatcgc gattgagcac tcagggttatt ctgtatttgc tgggtgtgggt 480
gagcgtactc gtgagggtaa cgacttctac cacgagatga ctgactccaa cgttctggac 540
aaagtatcct tgggtgatgg ccagatgaat gagccaccag gtaaccgtct gcgcgttgca 600
ctgaccggcc tgaccatggc ggagaaattc cgtgatgaag gtcgtgacgt actgttggtc 660
atcgataaca tctatcgcta taccttggcc ggtacggaag tatccgcact gctgggtcgt 720
atgccatcag cggtaggcta ccagccaacg ctggcagaag agatgggtgt gttgcaggaa 780
cgtattacgt ccaccaagac gggttc 806
```

<210> 396
<211> 806
<212> DNA
<213> *Yersinia pseudotuberculosis* ATCC 29833

```
<400> 396
gctgtaccaa aagtgtacaa cgcccttgag gtagaaggca caactgaaaa gttagtgtctg 60
gaagttcagc aacagttggg cgggtggtgtt gttcgttgta tcgcaatggg ctcttccgat 120
ggtctgagcc gtgggttgaa agtaaccaac ctggaacacc cgatcgaagt accggttggt 180
aaagcgaccc ttggccgtat catgaacgta ttgggtgaac caatcgacat gaaaggtcct 240
atcgggtgaag aagagcgttg ggcaatccat cgcgaagcgc cttcttatga agagcttgct 300
agctcacaaag atctgttaga aaccgggtatc aagggttatgg acctgatttg tccgtttgct 360
aagggcggtgta aagtcggtct gttcgggtggt gcgggtgtag gtaaaacagt aaacatgatg 420
gagctgatcc gtaacatcgc gatcgagcac tctgggtatt ctgtatttgc cgggtgtaggt 480
gagcgtaccc gtgagggtaa tgacttctac catgaaatga ctgactccaa cgttttggac 540
aaagtatcct tgggtttacgg ccagatgaat gagccaccag gtaaccgtct acgcgttgca 600
ctgaccggcc tgaccatggc ggagaaattc cgtgatgaag gtcgtgacgt actgctgttc 660
atcgataata tctatcgcta taccctagct ggtacggaag tatccgcatt gctgggtcgt 720
atgccatcag cggtaggtta tcagccaaca ctggctgaag agatgggtgt gttgcaggaa 780
cgtattactt ccactaagac gggttc 806
```

<210> 397
<211> 829
<212> DNA
<213> *Yersinia rohdei* ATCC 43380

```
<400> 397
ttcccccaag acgctgtacc aaaagtgtac aacgcccttg aggttgaagg tgcagctgag 60
aagcttgtgc tggaagttca gcagcagctg ggcgggtggtg ttgttcgttg tatcgcaatg 120
ggctcttccg atgggtttgag ccgtgggttg aaagtattca acctggaaca cccaattgaa 180
gtgccagttg gtaaatcaac tctgggccgt atcatgaacg tattgggtga cccaatcgac 240
atgaaaggcc ctatcggtga agaagagcgt tgggcaatcc accgtgaagc gccttcttac 300
gaagagcttg ccagctcgca agatctgtta gaaaccggtg tcaaggtaat ggatctgatt 360
tgtccgttcg ctaaggggcg taaagtcggt ctgttcggtg gtgcgggtgt tggtaaaaca 420
gtaaacatga tggagcttat tcgtaacatc gcgattgagc actcaggtta ttctgtattt 480
gccggggtag gtgaacgtac tcgtgagggt aacgacttct accacgagat gactgactcc 540
aacgttctgg acaaaagtatc cttggtttat ggccagatga atgagccacc aggtaacctg 600
ctgcgcgttg cactgaccgg cttgaccatg gcggaaaaat tccgtgatga aggccgtgac 660
gtattgctgt tcatcgataa catttatcgt tataccctag ccggtacgga agtatccgca 720
ctgctgggtc gtatgccatc tgcggtaggc tatcagccaa cactggcaga agagatgggt 780
gtgttgacag aacgtattac ttccactaag acgggttcaa tcacctccg 829
```

<210> 398
<211> 819
<212> DNA
<213> *Yokenella regensburgei* ATCC 35313

```
<400> 398
atgccgtacc gcgcgtgtac gatgctcttg aggtacaaaa tggtaacgag aaactgggtgc 60
tggaagctca gcagcagctc ggccggcggtg tcgtgcgtac tatcgccatg ggttcttccg 120
acggctctgcg tcgtggtctg gaagttaaag acctcgagca cccgatcgaa gtcccgttag 180
gtaaagcaac cctgggccgt atcatgaacg tcctgggtca gccgatcgac atgaaaggcg 240
acatcggtga agaagagcgt tgggctatcc accgcgcagc accttcctat gaagagctgt 300
ccagctctca ggaactgctg gaaaccggta tcaaagtaat ggatctgatc tgcccgttcg 360
```


ctaagggtgg	taaagtcggt	ctgttcggtg	gtgcgggtgt	aggtaaaact	gtaaacaatga	420
tggagcttat	cgcgaacatc	gcgattgagc	actccgggta	ctctgtgttt	gcaggcgtgg	480
gtgaacgtac	tcgtgagggt	aacgacttct	accacgaaat	gaccgactcc	aacgtactgg	540
ataaagtatc	cctggtgtac	ggccagatga	acgagccgcc	gggaaaccgt	ctgcgcgttg	600
cgctgaccgg	cctgaccatg	gctgagaaa	tccgtgacga	aggccgtgac	gttctgctgt	660
tcgtcgataa	catctaccgt	tataccctgg	cgggtacgga	agtatccgca	ctgctgggtc	720
gtatgccttc	tgcggtaggt	tatcagccaa	ctctggcgga	agagatgggt	gttcttcagg	780
aacgtatcac	ctctaccaa	accggttcta	tcacctccg			819

<210> 399

<211> 1097

<212> DNA

<213> *Yarrowia lipolytica* ATCC 38295

<400> 399

aagcttaagg	ctgagcgaga	gcgaggtatc	accattgata	tcgctctctg	gaagttccag	60
accctaagt	actacgtcac	cgttattgat	gtccccggtc	accgagattt	catcaagaac	120
atgattaccg	gtacttccca	ggctgactgc	gccatcctca	tcattgctgg	tgggtgttgg	180
gagttcgagg	ctggtatctc	caaggatggg	cagacccgag	agcacgccct	gctcgctttc	240
accctcggtg	ttaagcagct	cattgtttgt	atcaacaaga	tggactccgt	caagtgggtc	300
caggatcgat	acctcgagat	ttgcaaggag	actgccaact	tcgtcaagaa	ggtcgggttac	360
aaccccaagg	ctgtccccct	cgccccatt	tccggatgga	acggtgacaa	catgatcgag	420
ccctctacca	actgtgactg	gtacaaggga	tggaccaagg	agaccaaggc	cggcgagatc	480
aagggtaaaga	ccctcctcga	ggccattgat	gccattgagc	cccccggtgc	acccacgac	540
aagccccctc	gacttcccc	ccaggatgtc	tacaagatcg	gtggtatcgg	cacagtgtcc	600
gttggtccgag	tcgagaccgg	tggtatcaag	gccggtatgg	ktgttacctt	cgctccccgc	660
aacgtgacca	ctgaggtcaa	gtctgtcgag	atgcaccacg	agatcctccc	cgatggagggt	720
ttccccgggtg	acaacgtcgg	tttcaacgtc	aagaacgttt	ccgtcaagga	tatccgacga	780
ggtaacgttg	ctggtgactc	caagaacgac	cccccaagg	gctgcgactc	tttcaacgct	840
cagggtcattg	ttcttaacca	ccccggtcag	atcggtgctg	gttacgctcc	cgctccttgat	900
tgccacactg	cccacattgc	ttgcaagttc	gacaccctga	tcgagaagat	cgaccgacga	960
accggttaaga	agatggagga	ctcccccaag	ttcatcaagt	ctggtgatgc	tgccattgtc	1020
aagatggttc	cctccaagcc	catgtgtgtc	gaggccttca	ctgagtacc	ccctcttgggt	1080
cgattcgccg	tccgaga					1097

<210> 400

<211> 1233

<212> DNA

<213> *Absidia corymbifera* ATCC 46775

<220>

<221> misc_feature

<222> (974)..(974)

<223> n may be any nucleotide

<400> 400

caagcttaag	gctgaacgtg	agcgtgggtat	caccatcgat	atcgctctct	ggaagttcga	60
gactcccaag	taccacgtta	ccgtcattga	tgcctctggc	catcgatgatt	tcatacaaga	120
catgattact	gggtacttccc	aagctgactg	cggtatcttg	attattgctg	ctgggtactgg	180
tgaattcgaa	gctgggtatct	ccaaggatgg	tcaaaccctg	gaacacgctt	tgcttgcttt	240
caccttgggt	gtccgtcaat	tgattgtcgc	tatcaacaag	atggattcca	ccaagtactc	300
tgaggcccggt	tacaacgaaa	ttgtcaagga	agtctccacc	ttcatcaaga	agattgggtt	360
caaccccaag	tcggttcctt	tcgtccctat	ctctggctgg	aacggtgaca	acatgttggg	420
ggartccacc	aacatgcctt	ggttcaagggt	atggaacaag	gagactaagg	ctgggtgcca	480
gacyggcaag	acccttcttg	aagccattga	caacattgat	ccccctgttc	gtccttccga	540
caagccccctt	cgtcttcccc	ttcaagatgt	ctacaagatc	gggtggtattg	gtacagttcc	600
tgctcggtcgt	gttgagactg	gtgtcatcaa	gcctgggtatg	gttggtacct	tcgtctccgc	660
taacgtcacc	actgaagtca	agtccgtyga	aatgcaccac	gagcaacttg	ctgaagggtg	720
tcccgggtgac	aacgtcggtt	tcaacgtcaa	gaacgtttcc	gtcaaggata	tccgccgtgg	780
taacgtytgc	tctgactcca	agaacgaccc	cgccaaggaa	tccgcttcc	tcaccgctca	840
agttattgtc	ttgaaccacc	ctggtcarat	tggtgctggg	tactctcctg	tcttggattg	900
ccacactgct	cacattgcat	gcaagttcty	tkagcttctt	kagaagatcg	atygtcgttc	960
cggtaagtaa	atantttggg	ttrggatag	gggtattgggc	ttaatctytg	gattttgcct	1020
caattgctcc	ttccttgatc	tttctcgatt	actttttgat	catttgctaa	tccaaaccct	1080

ttccattt	ttgaaaacag	gtaagaagtt	ggaagactcc	cccaagttcg	tcaagwsygg	1140
tgactctgcy	atcgtaacga	tggttccttc	caagcccatg	tgcggtgaag	cctacactga	1200
atatacctct	cttggtcggt	tcgctgtccg	tga			1233

<210> 401

<211> 1151

<212> DNA

<213> *Alternaria alternata* ATCC 62099

<400> 401

caagttgaag	gccgagcgtg	agcgtgggtat	caccatcgac	attgctctct	ggaagttcga	60
gactcccaag	gttagtacct	ctctgcctac	tacatcaagt	tctttacaat	gctaacatgt	120
tgtactcagt	actatgtcac	cgatcattgac	gcccccggtc	accgtgattt	catcaagaac	180
atgatcactg	gtacctccca	ggccgactgc	gctattctca	tcattgccgc	cggtagctgt	240
gagttcgagg	ctgggtatctc	caaggatggc	cagactcggt	agcacgctct	cctcgcttac	300
accctcggtg	tcaagcagct	catcggttgc	atcaacaaga	tggacaccac	caagtgggtc	360
gaggagcgtt	accaggagat	catcaaggag	acctccaact	tcatcaagaa	ggtcgggtac	420
aaccccaagc	acgttccctt	cgcccccatc	tccgggtttca	acggtgacaa	catgattgag	480
gcctcatcca	actgcccctg	gtacaagggt	tgggagaagg	agaccaaggc	caaggccact	540
ggtaagaccc	tctcgaggcc	catcgacgcc	atcgacccty	ccagccgtcc	caccgacaag	600
ccccctcgtc	ttccccctyca	ggatgtttac	aagattgggtg	gtattggcac	ggtgcccgtc	660
ggtcgtgtcg	agaccgggtat	catcaaggcc	ggtagtgggtc	tcaccttcgc	ccccgctggt	720
gtcaccactg	aagtcaagtc	cgtagagatg	caccacgagc	agtcaccga	gggtgtcccc	780
ggtgacaacg	tgggttcaa	cgtaagaac	gtctccgtca	aggagatccg	tcgtggtaac	840
gttgccgggtg	actccaagaa	cgaccccccc	aagggtgccc	agtccttcaa	cgcccgagtc	900
atcgctctca	accaccctgg	tcagggtcgg	gctgggttac	ccccagtcct	cgactgccac	960
accgcccaca	ttgcttgcaa	gttctctgag	ctcctcgaga	agattgaccg	ccgtaccgga	1020
aagtctgttg	agaactctcc	caagttcatc	aagtccgggtg	acgccgccat	cgtaacgatg	1080
gttccctcca	agcccatgtg	cgtagaggt	ttcactgact	accctcctct	cggtcgtttc	1140
gctgtccgtg	a					1151

<210> 402

<211> 1283

<212> DNA

<213> *Aspergillus flavus* ATCC 26947

<400> 402

caagctcaag	tccgagcgtg	agcgtgggtat	caccatcgat	atcgccctct	ggaagttcca	60
gacctccaag	tatgaggtca	ccgtcattgg	taagcatttg	agttccaacc	tacgttgccc	120
aacattttaca	gtcatctaac	aaagttcaat	agatgcccc	ggtcaccgtg	acttcatcaa	180
gaacatgata	actggtactt	cccaggctga	ctgcgctatc	ctcatcattg	cctccgggtac	240
tgggtgaattc	gaggctggta	tctccaagga	tggtagacc	cgtgagcacg	ctctgctcgc	300
tttcaccctg	gggtgtccgtc	agctcatcgt	tgccctcaac	aagatggaca	cctgcaagtg	360
gtctcaggat	cgttacaacg	aaatcgttaa	ggagacttcc	aacttcatca	agaagggtcgg	420
atacaacccc	aagagcgttc	ctttcgctcc	catctccggt	ttcaacgggtg	acaacatgat	480
tgaggccctcc	accaactgcc	cctgggtacaa	gggttgaggag	aaggagacca	agggtggcaa	540
gtccaccgggt	aagacccttc	tcgaggccat	cgatgccatc	gagccccccg	tccgtcccac	600
cgacaagcct	ctccgtcttc	ccctycagga	tgtctacaag	atctctggta	tcggtagctgt	660
gcccgctcgg	cgtgtcgaga	ctgggtgtcat	caagcctgggt	atgggtcgta	ctttcgctcc	720
tgccaacgtg	accactgaag	tcaagtcctg	tgaatgcac	caccagcagc	tccaggcccg	780
taaccccgggt	gacaacgttg	gtttcaacgt	caagaacgtc	tccgtcaagg	aagtccgccc	840
tggttaacgtt	gccgggtgact	ccaagaacga	ccccctgct	ggctgcgatt	ccttcaacgc	900
ccaggtcatc	gtccttaacc	acccgggtca	ggtagcgaac	ggttacgctc	cctgctggga	960
ctgccacacc	gtcacattg	cttgcaagtt	cgctgagctc	cttgagaaga	ttgaccgccg	1020
taccggtaaa	tctgttgagg	acaagcccaa	gttcatcaag	tctgggtgatg	ctgccatcgt	1080
caagatgatt	ccctccaagc	ccatgtgtgt	ggagttcttc	actgacttcc	ccccctcttg	1140
tcgtttcgtc	gtccgtgacg	taagtttttc	cctcttgact	atcttcacaa	tttttcacat	1200
attttcacgc	ctcgtccac	tcttttccct	cccttcctct	ttgggtcccc	tttttgccgtg	1260
caagttctct	atagctaaca	tga				1283

<210> 403

<211> 1103

<212> DNA

<213> *Aspergillus fumigatus* strain DAL-95

<400> 403

tccgagcgtg	agcgtggtat	caccatcgac	attgccctct	ggaagttcca	gactcccaag	60
tatgagggtca	ctgtcatcgg	taagctcgac	tcgccccgat	atgttttggg	gctgtagcta	120
acacgatctg	aagatgcccc	cggtcaccgt	gacttcatca	agaacatgat	cactgggtacc	180
ttccaggctg	actgcgctat	cctcatcatt	gcctccggta	ctgggtgagtt	cgaggctggg	240
atctccaagg	atggccagac	ccgtgagcac	gctctgctgg	ctttcaccct	cggtgtcaag	300
cagctcatcg	tcgccctcaa	caagatggac	acctgcaagt	ggtccgagga	tcgttacaac	360
gaaattgtca	aggaaacctc	caacttcate	aagaaggctg	gctacaaccc	caaggccggt	420
cccttcgtcc	ccatctctgg	cttcaacggt	gacaacatgc	ttgagccctc	ctccaactgc	480
ccctggtaca	agggatggga	gaaggagacc	aaggccggca	aggtcactgg	taagaccctc	540
atcgaggcca	tcgacgccat	tgagccccct	gtccgtccct	ccaacaagcc	cctccgtctt	600
ccccctccagg	atgtctacaa	gatctctggt	atcggaacgg	tccctgtcgg	ccgtgtcgag	660
accggtatca	tcaagcccgg	catggctcgt	accttcgccc	ccgccaacgt	caccactgaa	720
gtcaagtccg	tcgagatgca	ccaccagcag	ctccaggagg	gtgtccccgg	tgacaacgtc	780
ggtttcaacg	tcaagaacgt	ttccgtcaag	gaagtccgcc	gtggtaacgt	ctgcggtgac	840
tccaagaacg	atccccctca	gggtgctgcc	tccttcaacg	cccaggctcat	cgctctcaac	900
caccccggtc	aggtcggcgc	tggttacgcc	cccgctcctg	actgccacac	tgcccacatt	960
gcttgcaagt	tctctgagct	gcttgagaag	attgaccgcc	gtaccggcaa	gtctgttgag	1020
aacaacccca	agttcatcaa	gtccgggtgat	gccgccatcg	tgaagatggt	tccttccaag	1080
cccatgtgtg	tcgagtcctt	cac				1103

<210> 404

<211> 1149

<212> DNA

<213> *Aspergillus fumigatus* strain WSA-172

<400> 404

aagctcaagt	ccgagcgtga	gcgtgggtatc	accatcgaca	ttgccctctg	gaagttccag	60
actcccaagt	atgaggtcac	tgtcatcggg	aagctcgact	cgccccgata	tgttttgggtg	120
ctgtagctaa	cacgatctga	agatgcccc	ggtcaccgtg	acttcatcaa	gaacatgatc	180
actgggtacct	cccaggctga	ctgcgctatc	ctcatcattg	cctccggtag	tggtgagttc	240
gagggtggta	tctccaagga	tgccagagacc	cgtgagcacg	ctctgctggc	tttcacccctc	300
gggtgtcaagc	agctcatcgt	cgccctcaac	aagatggaca	cctgcaagtg	gtccgaggat	360
cgttacaacg	aaattgtcaa	ggaaacctcc	aacttcatca	agaaggctcg	ctacaacccc	420
aaggccggtt	ccttcgtccc	catctctggc	ttcaacgggtg	acaacatgct	tgagccctcc	480
tccaactgcc	cctggtacaa	gggatgggag	aaggagacca	aggccggcaa	ggtcactggt	540
aagaccctca	tcgaggccat	cgacgccatt	gagccccctg	tccgtccctc	caacaagccc	600
ctccgtcttc	ccctccagga	tgtctacaag	atctctggta	tcggaacggg	ccctgtcggc	660
cgtgtcgaga	ccggtatcat	caagccccgg	atggtcgtca	ccttcgcccc	cgccaacgtc	720
accactgaag	tcaagtccgt	cgagatgcac	caccagcagc	tccaggaggg	tgtccccggg	780
gacaacgtcg	gtttcaacgt	caagaacgtt	tccgtcaagg	aagtccgccg	tggtaacgtc	840
tgcggtgact	ccaagaacga	tccccctcag	ggtgctgcct	ccttcaacgc	ccaggctcatc	900
gtcctcaacc	accccggtca	ggtcggcgct	ggttacgccc	ccgtcctcga	ctgccacact	960
gcccacattg	cttgcaagtt	ctctgagctg	cttgagaaga	ttgaccgccg	taccggcaag	1020
tctgttgaga	acaaccccaa	gttcatcaag	tccggtgatg	ccgccatcgt	gaagatggtt	1080
ccttccaagc	ccatgtgtgt	cgagtccttc	actgactacc	ccccctctggg	tcgtttcggc	1140
gtccgtgac						1149

<210> 405

<211> 1151

<212> DNA

<213> *Aspergillus niger* ATCC 9508

<400> 405

caagctcaag	tccgagcgtg	agcgtggtat	caccatcgac	attgccctct	ggaagttcca	60
gactggcaag	tatgagggtca	ccgtcattgg	tatgtactca	cagagttctc	ttttcatcaa	120
agcaatatac	taacgtccat	catagacgcc	cccggtcacc	gtgacttcat	caagaacatg	180
atcactggta	cctcccaggc	tgactgcgct	atcctcatca	ttgcctccgg	tactgggtgag	240
ttcgaggctg	gtatctccaa	ggatggccag	actcgtgagc	acgtctctgt	tgctttcacc	300
ctcgggtgct	gccagctcat	cgttgccctc	aacaagatgg	acacctgcaa	gtgggtccgag	360
gaccgtttaca	acgaaatcgt	taaggagacc	tccaacttca	tcaagaagggt	cggatacaac	420
cccaaggggtg	ttcctttcgt	ccccatctcc	ggtttcaacg	gtgacaacat	gctcgagccc	480

tcccccaact	gccccctggta	caaggggttgg	gagaaggaga	ccaagggcgg	caaggtcacc	540
ggtaagaccc	tccttgaggc	catcgacgcc	atcgagcccc	ccgtccgtcc	ctccaacaag	600
ccccctcgtc	ttccccctcca	ggatgtctac	aagatctccg	gtattggaac	tggtccccgtc	660
ggtcgtgtcg	agaccgggtat	cattgccccct	ggatgggtcg	tgaccttcgc	tcccgccaac	720
gtcaccactg	aagtcaagtc	cgttgagatg	caccaccagc	agctcaagga	aggtgtcccc	780
ggtgacaacg	ttgggtttcaa	cgtaagaac	gtttccgtca	aggagggttcg	ccgtggtaac	840
gttgccgggtg	actccaagaa	cgacccccct	cttggctgtg	agagcttcac	cgcccaggtc	900
atcgctcctca	accacccccg	tcaggtcggc	gctgggttacg	ctcccgtcct	ggactgccac	960
actgctcaca	ttgcttgcaa	gttcgctgag	ctccttgaga	agattgaccg	ccgtaccgga	1020
aagtctgttg	aatcttcccc	caagttcatc	aagtcgggtg	acgctgccat	cgtaaatg	1080
attccctcca	agcccatgtg	tgttgaggct	ttcactgact	acccccctct	tggtcgtttc	1140
gccgtccgcg	a					1151

<210> 406
 <211> 1093
 <212> DNA
 <213> *Blastoschizomyces capitatus* ATCC 10663

<400> 406						
gcttaaagct	gaacgtgaac	gtgggtatcac	cattgatatac	gctctctgga	agttcgaaac	60
tcctaagtac	tacgttactg	ttattgatgc	tccagggtcac	cgtgatttca	tcaagaacat	120
gattactggg	acttcccaag	ccgattgccc	cattcttatac	attgctgccg	gtgtcgggtga	180
attcgaaagt	ggtatctcca	aggaagggtca	aaccagagaa	cacgctcttc	tcgctttcac	240
ccttggtgtc	agacaactta	tcattgccat	caacaagatg	gactctgtca	agtgggacca	300
aaagagatac	gaagaaatcg	tcaaggaggc	ttccaacttc	gtcaagaagg	ttgggttaca	360
ccccaaagtct	gttccattcg	ttcctatctc	tggttggaac	ggtgacaaca	tggttggaacc	420
taccaccaac	gccccatggt	acaagggatg	gaccaaggaa	accaaggctg	gtgccactaa	480
gggtatgact	cttattgaag	ccattgacgc	cattgaacca	ccagtaagac	catccgacaa	540
gccactccgt	ctcccactcc	aagatgttta	caagattggg	ggtatcggaa	ctgtgccagt	600
cgcccggtgc	gaaaccggta	tcatacaggc	cggtatgggtc	gttacctttg	ctccaccaat	660
ggtcacaact	gaagttaagt	ccgttgaaat	gcaccacgaa	caacttgctc	aaggtaaccc	720
aggtgacaac	gttggtttca	acgtcaagaa	cgtttccgtt	aaggaaatca	gacgtggtaa	780
cgtctgtggt	gactccaaga	acgatccacc	aaagggtctg	gaatctttca	acgctcaagt	840
tatcgctctg	aaccaccctg	gtcaaattctc	tgctgggttac	tctccagttc	tcgattgcca	900
cactgcccac	attgcctgca	gattcgacga	actccttgaa	aagatcgacc	gtcgttctgg	960
taagaagatt	gaagactctc	caaagtttgt	caagtctggt	gatgccgcta	tcgtcaagat	1020
gatcccaacc	aagccaatgt	gcgttgaaac	cttcaactgaa	taccaccac	ttgggtcgttt	1080
cgccgtccgt	gat					1093

<210> 407
 <211> 1101
 <212> DNA
 <213> *Candida albicans* ATCC 10231

<400> 407						
cttgacaaaa	ttgaaggctg	aaagagaaaag	aggtatcacc	attgatatacg	ctttgtggaa	60
attcgaaact	ccaaaataacc	acgttaccgt	cattgatgct	ccaggtcaca	gagatttcat	120
caagaatatg	atcactggta	cttctcaagc	tgattgtgct	attttgatta	ttgctgggtgg	180
tactgggtgaa	ttcgaagccg	gtattttctaa	ggatgggtcaa	accagagaac	acgctttggt	240
ggcttacact	ttgggtgtca	aacaattgat	tggtgctgtc	aacaagatgg	actctgtcaa	300
atgggacaaa	aacagatttg	aagaaatcat	caaggaaacc	tccaacttcg	tcaagaagggt	360
tggttacaac	ccaaagactg	ttccattygt	tccaatctct	ggttggaatg	gtgacaacat	420
gattgaacca	tccaccaact	gtccatggta	caagggttgg	gaaaaggaaa	ccaaatccgg	480
taaagttact	ggtaagacct	tgttagaagc	tattgacgct	attgaaccac	caaccagacc	540
aaccgacaaa	ccattgagat	tgccattgca	agatgtttac	aagatcggtg	gtattgggtac	600
tgtgccagtc	ggtagagttg	aaactgggtat	catcaaagcc	ggatgggttg	ttacttttcgc	660
cccagctggg	gttaccactg	aagtcaaatc	cgttgaaatg	catcacgaac	aattgggtga	720
aggtgttcca	ggtgacaatg	ttgggtttcaa	cttgaagaac	gtttccgtta	aagaaattag	780
aagaggtaac	gtttgtgggtg	actccaagaa	cgatccacca	aagggttgtg	actctttcaa	840
tgcccaagtc	attgttttga	accatccagg	tcaaattctct	gctgggttact	ctccagtcct	900
ggattgtcac	actgcccaca	ttgcttgtaa	attcgacact	ttgggttgaaa	agattgacag	960
aagaactggg	aagaaattgg	aagaaaaatcc	aaaattcgctc	aaatccgggtg	atgctgctat	1020
gctcaagatg	gtcccaacca	aaccaatgtg	tggtgaagct	ttcactgact	acccaccatt	1080
aggtagattc	gctgtcagag	a				1101

<210> 408
<211> 1089
<212> DNA
<213> *Candida albicans* ATCC 18804

```
<400> 408
gaaggctgaa agagaaagag gtatcaccat tgatatcgct ttgtggaaat tcgaaactcc 60
aaaataccac gttaccgtca ttgatgctcc aggtcacaga gatttcatca agaatatgat 120
cactgggtact tctcaagctg attgtgctat ttgtattatt gctgggtgga ctggtgaatt 180
cgaagccggt atttctaagg atggtcaaac cagagaacac gctttgttgg cttacacttt 240
gggtgtcaaa caattgattg ttgctgtcaa caagatggac tctgtcaaat gggacaaaaa 300
cagatttgaa gaaatcatca aggaaacctc caacttcgtc aagaagggtg gttacaaccc 360
aaagactggt ccattcgttc caatctctgg ttggaatggt gacaacatga ttgaaccatc 420
caccaactgt ccattggtaca agggttggga aaaggaaacc aaatccggtg aagttactgg 480
taagaccttg ttagaagcta ttgacgctat tgaaccacca accagacca cgcacaaacc 540
attgagattg ccattgcaag atgtttacaa gatcgggtgg attggtactg tgccagtcgg 600
tagagttgaa actggtatca tcaaagccgg tatggttggt actttcgccc cagctgggtg 660
taccactgaa gtcaaatccg ttgaaatgca tcacgaacaa ttggctgaag gtgttcagg 720
tgacaatggt ggtttcaacg ttaagaacgt ttccgttaaa gaaattagaa gaggtaacgt 780
ttgtggtgac tccaagaacg atccaccaa gggttgtgac tctttcaatg cccaagtcac 840
tgttttgaac catccaggtc aaatctctgc tggttactct ccagtccttg attgtcacac 900
tgcccacatt gcttgtaa atcgacacttt ggttgaaaag attgacagaa gaactggtaa 960
gaaattggaa gaaaatccaa aattcgtcaa atccggtgat gctgctatcg tcaagatggt 1020
cccaaccaa ccaatgtgtg ttgaagcttt cactgactac ccaccattag gtgattcgc 1080
tgtcagaga                                     1089
```

<210> 409
<211> 1101
<212> DNA
<213> *Candida albicans* ATCC 56884

```
<400> 409
cttggacaaa ttgaaggctg aaagagaaag aggtatcacc attgatatcg ctttgtggaa 60
attcgaaact ccaaaatacc acgttaccgt cattgatgct ccaggtcaca gagatttcat 120
caagaatatg atcactggta cttctcaagc tgattgtgct attttgatta ttgctgggtg 180
tactgggtgaa ttcgaagccg gtatttctaa ggatgggtcaa accagagaac acgctttgtt 240
ggcttacact ttgggtgtca aacaattgat tgttgctgtc aacaagatgg actctgtcaa 300
atgggacaaa aacagatttg aagaaatcat caaggaaacc tccaacttcg tcaagaaggt 360
tggttacaac ccaaagactg ttccattcgt tccaatctct ggttggaatg gtgacaacat 420
gattgaacca tccaccaact gtccatggta caagggttgg gaaaaggaaa ccaaaccgg 480
taaagttact ggtaagacct tgtagaagc tattgacgct attgaaccac caaccagacc 540
aaccgacaaa ccattgagat tgccattgca agatgtttac aagatcggtg gtattggtag 600
tgtgccagtc ggtagagttg aaactgggat catcaaagcc ggtatgggtg ttactttcgc 660
cccagctggg gttaccactg aagtc aaatc cgttgaaatg catcacgaac aattggctga 720
aggtgttcca ggtgacaatg ttggtttcaa cgtaagaac gtttccgtta aagaattag 780
aagaggtaac gtttgtggtg actccaagaa cgatccacca aagggttgtg actctttcaa 840
tgcccaagtc attgttttga accatccagg tcaaactctc gctggttact ctccagtcct 900
ggattgtcac actgccaca ttgcttgtaa attcgacact ttggttgaaa agattgacag 960
aagaactggg aagaaattgg aagaaaatcc aaaattcgtc aaatccggtg atgctgctat 1020
cgtcaagatg gtcccaacca aaccaatgtg tgttgaagct ttcactgact acccaccatt 1080
aggtagattc gctgtcagag a                                     1101
```

<210> 410
<211> 1102
<212> DNA
<213> *Candida albicans* ATCC 60193

```
<400> 410
cttggacaaa ttgaaggctg aaagagaaag aggtatcacc attgatatcg ctttgtggaa 60
attcgaaact ccaaaatacc acgttaccgt cattgatgct ccaggtcaca gagatttcat 120
caagaatatg atcactggta cttctcaagc tgattgtgct attttgatta ttgctgggtg 180
tactgggtgaa ttcgaagccg gtatttctaa ggatgggtcaa accagagaac acgctttgtt 240
ggcttacact ttgggtgtca aacaattgat tgttgctgtc aacaagatgg actctgtcaa 300
```

atgggacaaa	aacagatttg	aagaaatcat	caaggaaacc	tccaacttcg	tcaagaaggt	360
tgggtacaac	ccaaagactg	ttccattcgt	tccaatctct	gggttggaatg	gtgacaacat	420
gattgaacca	tccaccaact	gtccatggta	caagggttgg	gaaaaggaaa	ccaaatccgg	480
taaagttact	ggtaagacct	tgtagaagc	tattgacgct	attgaaccac	caaccagacc	540
aaccgacaaa	ccattgagat	tgccattgca	agatgtttac	aagatcggtg	gtattggtag	600
tgtgccagtc	ggtagagttg	aaactgggtat	catcaaagcc	ggtatgggtg	ttactttcgc	660
cccagctggt	gttaccactg	aagtcaaate	cgttgaaatg	catcacgaac	aattggctga	720
aggtgttcca	ggtgacaatg	ttgggtttcaa	cgtaaagaac	gtttccgtta	aagaaattag	780
aagaggtaac	gtttgtgggtg	actccaagaa	cgatccacca	aagggttgtg	actctttcaa	840
tgcccaagtc	attgttttga	accatccagg	tcaaactctct	gctggttact	ctccagtctt	900
ggattgtcac	actgcccaca	ttgcttgtaa	attcgacact	ttgggtgaaa	agattgacag	960
aagaactggt	aagaaattgg	aagaaaatcc	aaaattcgtc	aaatccggtg	atgctgctat	1020
cgtaagatg	gtcccaacca	aaccaatgtg	tggtgaagct	ttcactgact	accaccatt	1080
aggtagattc	gctgtcagag	at				1102

<210> 411

<211> 1102

<212> DNA

<213> Candida albicans ATCC 90028

<400> 411

cttggacaaa	ttgaaggctg	aaagagaaag	aggtatcacc	attgatatcg	ctttgtggaa	60
attcgaaact	ccaaaatacc	acgttaccgt	cattgatgct	ccaggtcaca	gagatttcat	120
caagaatatg	atcactggta	cttctcaagc	tgattgtgct	attttgatta	ttgctgggtg	180
tactggtgaa	ttcgaagccg	gtattttctaa	ggatgggtcaa	accagagaaac	acgctttgtt	240
ggcttacact	ttgggtgtca	aacaattgat	tggtgtgtgc	aacaagatgg	actctgtcaa	300
atgggacaaa	aacagatttg	aagaaatcat	caaggaaacc	tccaacttcg	tcaagaaggt	360
tgggtacaac	ccaaagactg	ttccattcgt	tccaatctct	gggttggaatg	gtgacaacat	420
gattgaacca	tccaccaact	gtccatggta	caagggttgg	gaaaaggaaa	ccaaatccgg	480
taaagttact	ggtaagacct	tgtagaagc	tattgacgct	attgaaccac	caaccagacc	540
aaccgacaaa	ccattgagat	tgccattgca	agatgtttac	aagatcggtg	gtattggtag	600
tgtgccagtc	ggtagagttg	aaactgggtat	catcaaagcc	ggtatgggtg	ttactttcgc	660
cccagctggt	gttaccactg	aagtcaaate	cgttgaaatg	catcacgaac	aattggctga	720
aggtgttcca	ggtgacaatg	ttgggtttcaa	cgtaaagaac	gtttccgtta	aagaaattag	780
aagaggtaac	gtttgtgggtg	actccaagaa	cgatccacca	aagggttgtg	actctttcaa	840
tgcccaagtc	attgttttga	accatccagg	tcaaactctct	gctggttact	ctccagtctt	900
ggattgtcac	actgcccaca	ttgcttgtaa	attcgacact	ttgggtgaaa	agattgacag	960
aagaactggt	aagaaattgg	aagaaaatcc	aaaattcgtc	aaatccggtg	atgctgctat	1020
cgtaagatg	gtcccaacca	aaccaatgtg	tggtgaagct	ttcactgact	accaccatt	1080
aggtagattc	gctgtcagag	at				1102

<210> 412

<211> 1101

<212> DNA

<213> Candida dubliniensis strain NCPF 3108

<400> 412

cttggataaa	ttgaaggctg	aaagagaaag	aggtatcacc	attgatatcg	ctttgtggaa	60
attcgaaact	ccaaaatacc	acgttaccgt	cattgatgct	ccaggtcaca	gagatttcat	120
caagaacatg	atcactggta	cttctcaagc	tgattgtgct	attttgatta	ttgctgggtg	180
tactggtgaa	ttcgaagccg	gtattttctaa	ggatgggtcaa	accagagaaac	acgctttgtt	240
ggcttacact	ttgggtgtca	aacaattgat	tggtgtgtgc	aacaagatgg	actctgtcaa	300
atgggacaaa	aacagatttg	aagaaatcat	caaggaaacc	tctaacttcg	tcaagaaggt	360
tgggtacaac	ccaaagactg	ttccattcgt	tccaatctct	gggttggaatg	gtgacaacat	420
gattgaagct	tccaccaact	gtccatggta	caagggttgg	gaaaaggaaa	ccaaatccgg	480
taaggttact	ggtaagacct	tgtagaagc	tattgatgct	attgaaccac	caaccagacc	540
aaccgacaaa	ccattgagat	tgccattgca	agatgtttac	aagatcggtg	gtattggtag	600
tgtgccagtc	ggtagagttg	aaactgggtg	cattaaagcc	ggtatgggtg	ttacttttgc	660
cccagctggt	gttaccactg	aagtcaaate	cgttgaaatg	catcacgaac	aattggctga	720
aggtgttcca	ggtgacaatg	ttgggtttcaa	cgtaaagaat	gtttctgtca	aagaaattag	780
aagaggtaac	gtttgtgggtg	actccaagaa	cgatccacca	aagggttgtg	actctttcaa	840
tgcccaagtc	attgtcttga	accatccagg	tcaaactctct	gctggttact	ctccagtctt	900
ggattgtcac	actgcccaca	ttgcttgtaa	attcgacact	ttgggtgaaa	agattgacag	960
aagaactggt	aagaaattgg	aagaaaatcc	aaaattcgtc	aaatccggtg	acgctgctat	1020

ygtcaagatg gtcccaacca aaccaatgtg tgttgaagct ttcactgact acccaccatt 1080
aggtagattc gctgtcagag a 1101

<210> 413
<211> 1098
<212> DNA
<213> *Candida catenulata* ATCC 10565

<400> 413
ggacaagctt aaggctgagc gtgagagagg tatcaccatt gacattgcct tgtggaagtt 60
cgagactccc aagtaccacg tcaactgtcat tgacgcccc gggtcacagag atttcatcaa 120
gaacatgata actggtacct cgcaggctga ctgtgctatc ttgatcattg cttccgggtg 180
cgggtgagttc gaggtctggtg tctccaagga cgggtcagacc cgtgagcacg ctttgttggc 240
ctacaccttg ggtgtcaagc agttgatcgt tgccatcaac aagatggact ccgtcaagtg 300
ggacaagaac agattcgagg agattgtcaa ggagaccacc aacttcgtca agaaggttgg 360
ttacaacccc aaggctgtcc ccttcgtccc catctctggc tggaaacggtg acaacatgat 420
tgaggcctcc accaactgcc cctggtacaa gggctgggag aaggagacca aggccggtaa 480
gtctaccggt aagaccttgt tggaggccat tgacgccatt gagcccccta ccagaccac 540
cgacaagccc ttgagattgc ccttgacaga atcggtggta ttggtacggt 600
gcccgtcgcc cgtgtcgaga cgggtgtcat caagcccggt atggtcgtca ccttcgcccc 660
cgctgggtgtc accactgaag tcaagtcggt cgagatgcac cagagcagt tgtccgaggg 720
tgtccccggt gacaacggtg gtttcaacgt caagaacgtc tctgttaagg agatcagacg 780
tggtaacggtc tgcggtgact ccaagaacga ccccccatg ggttgctctt ctttcaacgc 840
ccagggttatc gtgtgaacc accccggtca gatctctgcc ggttactctc ccgtcttggg 900
ctgccacacc gccacattg cttgcaagtt cgccgagttg atcgagaaga ttgacagacg 960
taccggttaag tccatggagg ctaaccccaa gtctcgtcaag tctgggtgacg ccgccatcgt 1020
caagatggag ccactaagc ccatgtgtgt tgaggccttc actgacttcc ctcccttggg 1080
tagattcgcc gtcagaga 1098

<210> 414
<211> 1102
<212> DNA
<213> *Candida dubliniensis* strain NCPF 3949

<400> 414
cttggataaa ttgaaggctg aaagagaaa aggtatcacc attgatatcg ctttgtggaa 60
attcgaaact ccaaaatacc acgttaccgt cattgatgct ccaggtcaca gagatttcat 120
caagaacatg atcactggta cttctcaagc tgatttgtgt attttgatta ttgctgggtg 180
tactggtgaa ttgaagccg gtattttctaa ggatgggtcaa accagagaac acgctttgtt 240
ggcttacact ttgggtgtca aacaattgat tgttgctgtc aacaagatgg actctgtcaa 300
atggggacaaa aacagattcg aagaaatcat caaggaaacc tctaacttcg tcaagaaggt 360
tggttacaac ccaaagactg ttccattcgt tccaatctct ggttggaatg gtgacaacat 420
gattgaagct tccaccaact gtccatggta caagggttgg gaaaaggaaa ccaaattccg 480
taaggttact ggtaagacct tgtagaagc tattgatgct attgaaccac caaccagacc 540
aaccgacaaa ccattgagat tgccattgca agatgtttac aagatcggtg gtattgggtac 600
tgtgccagtc ggtagagttg aaactgggtg cattaaagcc ggtatgggtg tcaactttgc 660
cccagctggt gtaccactg aagtcaaatc cgttgaaatg catcacgaac aattgggtga 720
aggtgttcca ggtgacaatg ttggtttcaa cgtaagaat gtttctgtca aagaaattag 780
aagaggtaac gtttgtggtg actccaagaa cgatccacca aagggttgtg actctttcaa 840
tgcccaagtc attgtcttga accatccagg tcaaactctc gctgggttayt ctccagtcct 900
ggattgtcac actgccaca ttgcttgtaa attcgacact ttggttgaaa agattgacag 960
aagaactggt aagaaattgg aagaaaatcc aaaattcgtc aaatccggtg acgctgctat 1020
ygtcaagatg gtcccaacca aaccaatgtg tgttgaagct ttcactgact acccaccatt 1080
aggtagattc gctgtcagag at 1102

<210> 415
<211> 1102
<212> DNA
<213> *Candida dubliniensis* CBS 7987

<400> 415
cttggataaa ttgaaggctg aaagagaaa aggtatcacc attgatatcg ctttgtggaa 60
attcgaaact ccaaaatacc acgttaccgt cattgatgct ccaggtcaca gagatttcat 120

caagaacatg	atcactggta	cttctcaagc	tgattgtgct	attttgatta	ttgctgggtg	180
tactgggtgaa	ttcgaagccg	gtattttctaa	ggatgggtcaa	accagagaaac	acgctttgtt	240
ggcttacact	ttgggtgtca	aacaattgat	tggtgtgtgc	aacaagatgg	actctgtcaa	300
atgggacaaa	aacagattyg	aagaaatcat	caaggaaacc	tctaacttcg	tcaagaaggt	360
tggttacaac	ccaaagactg	ttccattcgt	tccaatctct	ggttggaatg	gtgacaacat	420
gattgaagct	tccaccaact	gtccatggta	caagggttgg	gaaaaggaaa	ccaaatccgg	480
taaggttact	ggtaagacct	tgttagaagc	tattgatgct	attgaaccac	caaccagacc	540
aaccgacaaa	ccattgagat	tgccattgca	agatgtttac	aagatcgggtg	gtattgggtac	600
tgtgccagtc	ggtagagttg	aaactgggtg	cattaaagcc	ggtatgggtg	tcacttttgc	660
cccagctggg	gttaccactg	aagtcaaatc	cgttgaaatg	catcacgaac	aattgggtga	720
aggtgttcca	ggtgacaatg	ttggtttcaa	cgtaaagaat	gtttctgtca	aagaaattag	780
aagaggtaac	gtttgtgggtg	actccaagaa	cgatccacca	aagggttgtg	actctttcaa	840
tgcccaagtc	attgtcttga	accatccagg	tcaaactctct	gctggttayt	ctccagtctt	900
ggattgtcac	actgcccaca	ttgcttgtaa	attcgacact	ttggttgaaa	agattgacag	960
aagaactggt	aagaaattgg	aagaaaatcc	aaaattcgtc	aaatccgggtg	acgctgctat	1020
ygtcaagatg	gtcccaacca	aaccaatgtg	tgttgaagct	ttcactgact	acccaccatt	1080
aggtagattc	gctgtcagag	at				1102

<210> 416

<211> 1094

<212> DNA

<213> Candida famata ATCC 62894

<400> 416

aattgaaggc	tgaaagagaa	agaggtatca	ccattgatat	cgctttatgg	aaattcgaaa	60
ctccaaaata	ccacgttacc	gttattgatg	ctccagggtca	cagagatttc	atcaagaaca	120
tgattactgg	tacttctcaa	gctgattgtg	ctattttrt	tattgctggg	ggtgtcgggtg	180
aattcgaagc	cggtatctct	aaggatgggc	aaaccagaga	acacgcttta	ttggcttaca	240
ccttaggtgt	tagacaattg	attgttgccg	tcaacaagat	ggactctgtt	aaatgggaca	300
aggctagatt	cgaagaaatc	atcaaggaaa	cctctaactt	cgtcaagaag	gttggttaca	360
accctaagac	tgttcctttc	gtyccaattt	ctggatggaa	cgggtgacaac	atgattgaag	420
cctccaccaa	ctgtccatgg	tacaaggggt	gggaaaagga	aaccaaggct	ggtaaatcta	480
ctggtaagac	tttgtttagaa	gccattgatg	ccattgaacc	accaaccaga	ccaaccgaaa	540
agccattgag	attaccatta	caagatgtct	acaagatcgg	tggtattggg	actgtgccag	600
tcggtagagt	tgaaaccggg	gttatcaagg	gtggatgggt	tgttaccttt	gccccagccg	660
gtgtcactac	cgaagtcaaa	tccgttgaaa	tgcaccacga	acaattagct	gaagggtgtc	720
caggtgacaa	tgttgggttc	aacgtcaaga	acgtttccgt	taaggaaatc	agaagaggta	780
acgtttgtgg	tgactccaag	aacgacccac	caaagggtgc	tgaatctttc	accgctcaag	840
ttattgtctt	gaaccaccca	ggccaratct	ctgctgggtta	ctctccagtc	ttagattgtc	900
acaccgccc	cattgtcttg	aaattcgatg	ctttactcga	aaagattgac	agaagatccg	960
gtaagaaatt	agaagacgaa	ccaaaattcg	tcaagtccgg	tgatgctgct	atcgtcaaga	1020
tggtcccaac	caaaccaatg	tgtgttgaa	ctttcactga	ataccaccca	ttaggtagat	1080
tcgctgttag	agat					1094

<210> 417

<211> 1101

<212> DNA

<213> Candida glabrata ATCC 66032

<400> 417

tttgacaaag	ttgaaggctg	aaagagaaag	aggtatcact	atcgatatcg	ctttgtggaa	60
gttcgaaact	ccaaagtacc	acgtyaccgt	tatcgatgcy	ccaggtcaca	gagatttcat	120
caagaacatg	attactggta	cttctcaagc	tgactgtgct	atcttgatta	ttgctgggtg	180
tgctcggtgaa	ttcgaagcyg	gtatctccaa	ggatgggtcaa	accagagaaac	acgctctatt	240
ggctttcacc	ctagggtgta	gacaattgat	tgtygctgtc	aacaagatgg	actctgtcaa	300
gtgggatgaa	tccagattcg	ctgaaatcgt	taaggaaacc	tccaacttca	tcaagaaggt	360
cggttacaac	ccaaagactg	ttccattcgt	cccaatctct	ggttggaacg	gtgacaacat	420
gattgaagcc	accaccaacg	cttcctggta	caagggttgg	gaaaaggaaa	ccaaggctgg	480
tgctgtcaag	ggtaagacct	tgttggaagc	cattgacgct	atcgaaccac	caaccagacc	540
aactgacaag	ccattgagat	tgccattgca	agatgtctac	aagatcgggtg	gtatcggtac	600
ggtgccagtc	ggtagagtcg	aaaccggtgt	catcaagcca	ggtatgggtg	ttaccttcgc	660
cccagctggg	gttaccactg	aagtcaagtc	cgttgaaatg	caccacgaac	aattgactga	720
aggtttgcc	ggtgacaacg	ttggtttcaa	cgtaaagaac	gtttccgtta	aggaaatcag	780
aagaggtaat	gtctgtgggtg	actccaagaa	cgacccacca	aaggctgctg	cttctttcaa	840


```
cgctaccgctc attgtcttga accacccagg tcaaattctct gctgggttact ctccagtttt 900
ggactgtcac accgcccaca ttgcttgtaa gttcgaagaa ttgttggaagaa agaacgacag 960
aagatccggt aagaagttgg aagactctcc aaagttcttg aagtcggtg acgctgcttt 1020
ggttaagttc gttccatcca agccaatgtg tgtcgaagct ttctccgact acccaccatt 1080
gggtagattc gctgtcagag a                                     1101
```

<210> 418
<211> 1080
<212> DNA
<213> *Candida guilliermondii* ATCC 6260

```
<400> 418
agagaaagag gtatcaccat tgacattgct ttgtggaaat tgcgagactcc aaagtaccac 60
gttacygtca ttgatgcccc aggtcacaga gatttcacatc agaacatgat cactgggtact 120
tctcaagctg actgtgctat tttgattatt gctgggtgga cgggtgaatt cgaagctggt 180
atctctaagg atgggtcaaac cagagagcac gctttgttgg cttacacctt ggggtgtaga 240
caattgattg ttgctgtcaa caagatggac tccgtcaart gggacaagaa cagattygag 300
gaaatcatca aggaaacctc taacttcgtc aagaaggttg gttacaaccc taagactgtg 360
ccattcggtc ctatctcttg atggaayggt gacaacatga ttgaggcttc taccactgt 420
ccttggtaca agggatggga gaaggagacc aaggctggta agtccaccgg taagactttg 480
ttggaggcca ttgacgccat tgagccacct caaagaccaa cgcacaagcc attgagattg 540
ccattgcaag atgtytacia gattgggtgg attggaacgg tgccagtcgg tagagttgaa 600
accggtatca tyaaaggccgg tatggttggt acctttgccc cagctgggtg yaccactgaa 660
gtcaagtcgg tggaatgca ccacgaacaa ttggttgaag gtgttccagg tgacaatgtt 720
ggtttcaacg ttaagaacgt ttccgttaag gaaattagaa gaggtaacgt ttgtggtgac 780
tccaagaacg acccaccaaa gggttgtgac tctttcaccg ctcaagttat tgtgttgaa 840
caccctggtc aaatctctgc tggttactct ccagttttgg actgtcacac cgcccacatt 900
gcttgtaaat tgcacacctt gttggagaag attgacagaa gaaccggtaa gaagatggag 960
gacaacccca agtttgtcaa gtccggtgac gttctatcg tcaagatggt gccatccaag 1020
ccaatgtgtg ttgaggcttt caccgactac ccaccattgg gaagattcgc cgtcagagac 1080
```

<210> 419
<211> 751
<212> DNA
<213> *Candida haemulonii* ATCC 22991

```
<400> 419
tctgtcaagt gggacaaggc cagatacgag gaaatcgta aggagacctc taacttcgtc 60
aagaaggttg gttacaaccc taagactgtt ccattcgctc caatctctgg ttggaacggt 120
gacaacatga ttgaggcttc taccactgtt gactggtaca agggttggga gaaggagacc 180
aagtctggta agtccaccgg taagaccttg ttggaggcca ttgacgccat tgagccacca 240
accagaccaa cgcacaagcc attgagattg ccatcgaggc atgtctacia gattgggtgg 300
atcggaactg tgccagtcgg cagagttgag accggtgtta tcaaggccgg tatggttggt 360
accttcgccc cagctgggtg caccactgaa gtcaagtctg tgcagatgca ccacgagcag 420
ttgccagagg gtgtcccagg tgacaacggt ggtttcaacg tcaagaacgt ttccgttaag 480
gaaatcagaa gaggtaacgt ctgtggtgac tccaagcagg acccaccaaa gggctgtgac 540
tctttcaccg ctccaggttat tgtgttgaa caccaggtc agatctcttc tggttactct 600
ccagttttgg actgtcacac tgcccacatt gcttgttaag tgcacacctt ggttgagaag 660
atcgacagaa gaaccggtaa gaagttggaa gatgagcaa agttcatcaa gtccggtgac 720
gctgctatcg tcaagatggt cccaaccaag c                                     751
```

<210> 420
<211> 1102
<212> DNA
<213> *Candida inconspicua* ATCC 16783

```
<400> 420
tcttgacaag ttaaaggctg aaagagaaag aggtatcact attgatattg ctttatggaa 60
attcgaaaact ccaaagtatc acgttaccgt cattgatgct ccaggtcaca gagatttcat 120
taagaacatg attactggta cttctcaagc agattgtgct attttgatta ttgctgggtg 180
tgtcggtgaa ttcgaagctg gtatttccaa ggatgggtcaa actagagaa acgctttatt 240
agcattcacc ttaggtgtta agcaattgat tgttgctatc aacaagatgg attctgttaa 300
gtgggatgaa aagagatttg aagaaattgt caaggaaacc caaaacttca tcaagaaggt 360
```

tggttacaac	ccaaagactg	ttccattcgt	tccaatttct	ggttggaatg	gtgacaacat	420
gattgaacca	tcttctaact	gtccatggta	caaggggttg	actaaggaaa	ccaaggcagg	480
tgttgtcaag	ggtaagacct	tattagaagc	tattgatgct	attgaaccac	ctgtcagacc	540
aactgataag	ccattaagat	taccattaca	agatgtttac	aagattgggtg	gtattgggtac	600
tgtgccagtc	ggtagagttg	aaaccgggat	tattaagcca	ggtatgggtg	ttgttttcgc	660
accatctggt	gttaccactg	aagtcaagtc	cgttgaaatg	caccatgaac	aattagaaga	720
aggtgtccca	ggtgacaatg	ttggtttcaa	cgtaagaac	gtctctgtta	aggatatcaa	780
gagaggtaac	gtttgtgggtg	actccaagaa	tgaccaccca	caaggttggtg	cttccttcaa	840
tgctcaagtc	attgtcttga	accaccctgg	tcaaatttct	gctggttact	ctccagtttt	900
agattgtcac	actgcccaca	ttgcatgtaa	attcgatgaa	tttaattgaaa	agattgacag	960
aagaactggt	aagtcctgtg	aagaccatcc	aaagctctgt	aagtcctggtg	atgcagctat	1020
cgtaagatg	gttccaacca	agccaatgtg	tggtgaagct	ttcactgaat	acccaccatt	1080
aggtagattc	gcagtcagag	at				1102

<210> 421

<211> 1099

<212> DNA

<213> Candida kefyr ATCC 28838

<400> 421

tggacaagtt	aaaggctgaa	agagaaagag	gtatcaccat	cgatatcgct	ttgtggaagt	60
tcgaaactcc	aaagtaccaa	gttaccgtta	tcgatgctcc	aggtcacaga	gattttcatca	120
agaacatgat	tactggtact	tctcaagctg	actgtgctat	cttgattatt	gctgggtggtg	180
tcgggtgaatt	cgaagccggt	atctccaagg	atgggtcaaac	cagagaacac	gctttgttgg	240
cttacacctt	gggtggttaga	caattgattg	ttgctatcaa	caagatggac	tctgttaagt	300
gggatgaatc	tcgttaccaa	gaaattgtta	aggaaacctc	caacttcata	aagaaggctcg	360
gttacaaccc	aaagaatggt	ccattcgtcc	caatctctgg	ttggaacggt	gacaacatga	420
ttgaagccac	caccaacgct	ccatgggtaca	agggttggga	aaaggaaacc	aaggctggta	480
ccgtcaaggg	taagaccttg	ttggaagcta	ttgacgctat	cgaaccacca	accagaccaa	540
ctgacaagcc	attgagattg	ccattgcaag	atgtctacaa	gatcggtggt	attggtactg	600
tgccagtcgg	tagagtcgaa	accggtgtca	tcaagccagg	tatgggtgtt	accttcgccc	660
cagccgggtg	cactaccgaa	gttaagtccg	tcgaaatgca	ccacgaacaa	ttggaagaag	720
gtctaccagg	tgacaacgtc	ggtttcaacg	tcaagaacgt	ttccgttaag	gaaatcagaa	780
gaggtaacgt	ctgtggtgac	tccaagaacg	atccacaaaa	ggctgctgct	tctttcaacg	840
ccactgttat	cgtcttgaac	cacccaggtc	aaatctctgc	tggttactct	ccagttttgg	900
attgtcacac	tgctcacatt	gcttgtaagt	tcgacgaatt	gttggaanaag	aacgacagaa	960
gatccggtaa	gaagttggaa	gactctccaa	agttcttgaa	gtctggtgac	gctgctttgg	1020
ttaagttcgt	tccatctaag	ccaatgtgtg	ttgaagcatt	ctctgactac	ccaccattgg	1080
gtagattcgc	tgtcagaga					1099

<210> 422

<211> 1095

<212> DNA

<213> Candida krusei ATCC 34135

<400> 422

aagttaaaag	cagaaagaga	aagagggtatc	actattgata	ttgctttatg	gaagttygaa	60
actccaaart	accacgttac	cgttattgat	gctccaggtc	acagagattt	catcaagaac	120
atgattaccg	gtacttctca	agctgattgt	gctattttga	ttattgctgg	tggtgtcggt	180
gaattcgaag	ctggtatctc	caaggatggt	caaactagag	aacacgctct	attggctttc	240
accttaggtg	ttagacaatt	gattgttgct	atcaacaaga	tggattccgt	taartgggat	300
gaaaacagat	ttgaagaaat	tgtaagggaa	acccaaaact	tcatcaagaa	ggttgggttac	360
aacccaaaga	ctgttccatt	cgttccaaty	tctggttgga	atgggtgaaa	catgattgaa	420
gcatccacca	actgtccatg	gtacaagggt	tggaactaag	aaaccaaggc	aggtgtttgt	480
aagggttaaga	ccttattaga	agcaatcgat	gctattgaac	cacctgtcag	accaaccgaa	540
aagccattaa	gattaccatt	acaagattgt	tacaagattg	gtggatttgg	tactgtccca	600
gtcggtagag	tcgaaaccgg	tgctattaag	ccagggtatg	ttgtcacttt	tgctccagca	660
ggtgtcacca	ccgaagtcaa	gtccgttgaa	atgcaccatg	aacaattaga	acaagggtgt	720
ccagggtgata	acgttggttt	caacgttaag	aacgtttctg	tcaaggatat	caagagaggt	780
aacgttttgt	gtgactccaa	gaacgaccca	ccaatgggtg	cagcttcctt	caatgctcaa	840
gtcattgtct	tggtcaaaccc	tggtcaaaat	tccgctgggt	actctccagt	cttggattgt	900
cacactgccc	acattgcatg	taagttcgac	gaattaatcg	aaaagattga	cagaagaact	960
ggtaagtctg	ttgaagacca	tccaaagtgy	gtcaagtcgt	gtgatgcagc	tatcgtcaag	1020
atgggtcccaa	ccaagccaat	gtgtgttgaa	gcttttactg	aatayccacc	attaggtaga	1080

ttcgcagtca gagat

1095

<210> 423
<211> 1104
<212> DNA
<213> Candida lambica ATCC 24750

<400> 423
cttggacaag ctttaaggctg aaagagaaaag aggtatcacc attgatatcg ctttatggaa 60
gttcgaaaact ccaaagtacc acgttaccgt cattgacgct ccaggtcaca gagatttcat 120
caagaacatg attactggta cctctcaagc agattgtgct attttraty ttgctgggtg 180
tgctcggtgaa ttcgaagctg gtatctctaa ggatgggtcaa accagagaaac acgctcttct 240
tgcattcact cttgggtgta gacaattgat tgggtgctatc aacaagatgg actctgtcaa 300
gtgggacgaa tccagattcg atgaaatttg taaggaaaacc gcwaacttca tcaagaagg 360
tgggttacaac ccaaagactg ttccattcgt cccaatctct gggttggaaac gtgacaacat 420
gattgaacca tctgctaact gtccatggta caagggatgg actaaggaaa ccaaggcttc 480
cgggtgctgct aagggttaaga cccttcttga agcaattgat gctattgagc cacctgtcag 540
accaactgac aaggctttga gattgccatt rcaagatgtc tacaagattg gtgggtattg 600
tactgtgcca gtcggttaga ttgaaaccgg tatcatcaag ccaggatga ttgctgtttt 660
cgctccaacc ggtgttacta ctgaagttaa gtccgttgaa atgcaccatg aacaattaga 720
agaagggtgtc ccagggtgaca atgttgggtt caacgtcaag aacgtctctg ttaaggatat 780
taagagaggt aacgtctgtg gtgactccaa gaacgaccca ccaatgggtt gtgcttccct 840
caatgtctcaa gtcattgttc ttaaccaccc aggtcaaatt tctgctggtt actcaccagt 900
tcttgactgt cacactgccc acattgcatg taagttcgay gaattactcg aaaagattga 960
cagaagaacc ggtaaggcta ctgaagacca tccaaagtct gtcaagtctg gtgatgcagc 1020
tatcgtcaag atggttccaa ccaagccaat gtgtgtygaa gcttttactg actaccacc 1080
attaggtaga ttcgctgtya gaga 1104

<210> 424
<211> 1098
<212> DNA
<213> Candida lusitaniae ATCC 66035

<400> 424
ggacaagttg aaggctgaga gagaaagagg tatcaccatc gatatcgctt tgtggaagtt 60
cgagactcca aagtaccacg ttaccgtcat tgacgctcca ggtcacagag atttcatcaa 120
gaacatgatc actggtactt cccaagctga ctgtgctatc ttgattatcg ctggtgggtg 180
cgggtgagttc gaagccggta tctctaagga cgggtcaaacc agagagcacg ctttgttggc 240
ttacaccttg ggtgtcaagc agttgattgt tgctgtcaac aagatggact ccgtcaagt 300
ggaccaatct agattcgagg aaatcatcaa ggaaacctct aacttcgtca agaagggttg 360
ttacaacctt aagactgttc cattcgctcc aatctctggt tggaaacggtg acaacatgat 420
tgagccatcy accaactgcc catggtacaa gggttgggag aaggagacca agtcyggtaa 480
gtccaccggt aagacctgtg tggaggccat tgagccactt gagccacctt cgagaccaac 540
cgacaagcca ttgagattgc cattgcaaga tgcttacaag atygggtggt tgggtactgt 600
gccagtcggt agagttgaga ccggtgtcat caaggccggt atgggtgtca cctttgctcc 660
agctgggtgtc accactgaag tcaagtcctg ggaaatgcac cacgaacaat tggctgaggg 720
tgtcccaggt gacaacgttg gtttcaacgt caagaacgtt tccgtcaagg aaatcagaag 780
aggtaacgtc tgtggtgact ccaagaacga cccaccaag gctgctgctt cyttcactgc 840
tcaagtyaty gtcttgaacc acccagggtc aatctcctcy ggttactctc cagtyttgga 900
ctgtcacact gcycacattg cttgtaagtt cgacaccttg attgagaaga tcgacagaag 960
aacyggtaag aagttggaag aagagccaaa gttcatcaag tcygggtgac ctgctatcgt 1020
caagatgggtc ccaaccaagc caatgtgygt ygaagctttc accgactacc caccattggg 1080
tagattcgct gtcagaga 1098

<210> 425
<211> 1101
<212> DNA
<213> Candida norvegensis ATCC 22977

<400> 425
tcttgacaag ttaaaaggctg aaagagaaaag aggtatcact attgatattg ctttatggaa 60
attcgaaact ccaaaatacc acgttaccgt tattgatgct ccaggtcaca gagatttcat 120
taagaacatg attactggta cttcccaagc tgattgtgct atcttaatta ttgctgggtg 180

tgtcgggtgaa	ttcgaagctg	gtatctccaa	ggatgggtcaa	accagagAAC	acgcttttatt	240
agcattcacc	ttaggtgtta	agcaattaat	tgttgctatc	aacaagatgg	actctgttaa	300
gtgggatgaa	aagagatttg	aagaaattgt	caaggaaacc	caaaacttca	tcaagaaggt	360
tggttacaac	ccaaagactg	ttccattcgt	tccaatttct	ggttggaatg	gtgacaacat	420
gattgaacca	tctactaact	gtccatggta	caagggttgg	actaaggaaa	ccaaggcagg	480
tgttggttaag	ggtaagacct	tattagaagc	tattgatgct	attgaaccac	ctgtcagacc	540
aactgacaag	ccattaagat	taccattaca	agatgtttac	aagattgggtg	gtattggtac	600
tgtgccagtc	ggtagagttg	aaaccgggtg	tattaagcca	ggtatgggtg	ttgttttcgc	660
accatctggt	gttaccactg	aagtcaagtc	cgttgaaatg	caccatgaac	aattagaaca	720
agggtgtccc	ggtagacaatg	ttggtttcaa	gtctctgtta	aggatattaa		780
gagaggtaac	gtttgtgggtg	actccaagaa	cgaccaccca	caagggttgg	cttccttcaa	840
tgtctcaagtc	attgtcttga	accaccctgg	tcaaatttct	gcagggttact	ctccagtttt	900
agattgtcac	actgcccaca	ttgcatgtaa	gttcgatgaa	ttaatcgaaa	agattgacag	960
aagaactggt	aagtccggtg	aagaccatcc	aaagtctggt	aagtctgggtg	atgcagctat	1020
cggttaagatg	gttccaacca	agccaatgtg	tgttgaagct	ttcactgaat	accaccatt	1080
aggtagattc	gcagtcagag	a				1101

<210> 426

<211> 1095

<212> DNA

<213> *Candida parapsilosis* ATCC 90018

<400> 426

caaattgaag	gctgaaagag	aaagaggtat	caccattgat	atcgctttgt	ggaaattcga	60
aactccaaaa	taccatgtta	ctgttattga	tgtctccagg	cacagagatt	tcatcaagaa	120
tatgattact	ggtacttctc	aagctgattg	tgtctatttg	attattgctg	gtgggtactgg	180
tgaattcgaa	gctgggtatct	ctaaggatgg	tcaaaccaga	gaacacgctt	tgttggctta	240
caccttgggt	gttaagcaat	tgattgttgc	catcaacaag	atggactcag	tcaaattggga	300
caagaacaga	tacgaagaaa	ttgtcaagga	aacttccaac	ttcgtcaaga	agggttgggtta	360
caaccctaaa	gctgtcccat	tcgtcccaat	ctctgggttg	aacggtgaca	atatgattga	420
accatcaacc	aactgtccat	ggtacaaggg	ttgggaaaag	gaaactaaag	ctggtaaggt	480
taccggtaag	accttgttgg	aagctatcga	tgtctatcga	ccaccaacca	gaccaactga	540
caagccattg	agattgccat	tgcaagatgt	ctacaagatt	ggtgggtattg	gaactgtgcc	600
agttggtaga	gttgaaaccg	gtatcatcaa	ggctgggtatg	gttggttactt	ttgccccagc	660
tgggtgttacc	actgaagtca	agtccgttga	aatgcaccac	gaacaattga	ctgaaggtgt	720
cccagggtgac	aatgtttggt	tcaacgtcaa	gaacgtttca	gttaaggaaa	tcagaagagg	780
taacgtttgt	ggtgactcca	agaacgatcc	accaaaggga	tgtgaytcct	tcaatgctca	840
agttattgtc	ttgaaccacc	cagggtcaaat	ctctgctggt	tactcaccag	tcttggattg	900
tcacactgcc	cacattgctt	gtaaattcga	cactttgatt	gaaaagattg	acagaagaac	960
cggttaagaaa	ttggaagatg	aacccaaaatt	catcaagtcc	ggtgatgctg	cyatcgtaa	1020
gatggtccca	accaagccaa	tgtgtgttga	agctttcact	gactaccac	cattgggaag	1080
attcgctggt	agaga					1095

<210> 427

<211> 752

<212> DNA

<213> *Candida rugosa* ATCC 96275

<400> 427

ctccgtcaag	tgggtctcagt	ctcgtttcga	ggagatcgtc	aaggaggttt	ccaacttcat	60
caagaaggtt	gggttacaagc	ccgatgaggt	tcctttcgtc	cccatctctg	gctggaacgg	120
cgacaacatg	cttgagccct	ccaccaactg	ccctgggtac	aagggtatga	ccaagaagac	180
caagaagggt	gaggtcaagg	gtaagactct	tctcgaggcc	attgacgcca	tcgagccccc	240
ctcccgctct	accgacaagc	ccctccgctt	gcctcttcag	gatgtctaca	agatcggcgg	300
tatcggtatg	gtacctgtcg	gccgtgtcga	gaccggtatc	atcaagcccg	catgggtcgt	360
cactttcgcc	cccgtgggtg	tcaccactga	agtgaagtcc	gtcgagatgc	accacgagca	420
gatccccgag	ggtctccccg	gtgacaacgt	cggtttcaac	gtcaagaacg	ttaccgtcaa	480
ggatatccgc	cgtggtaacg	tctgcggtga	ctccaagaac	gaccccccca	agggctgctc	540
ttccttcaact	gcccagggtca	tcgttttcaa	ccaccccggt	cagatctcca	acgggttactc	600
ccccgttttg	gactgccaca	cgcccacat	tgcctgccgc	ttcgacgaga	tccagtccaa	660
gatggaccgt	gctactggta	agacccttga	ggagaacccc	aagttcatca	aggctgggtga	720
ctccgctatc	gtcaagatgg	ttccctccaa	gc			752

<210> 428
<211> 1093
<212> DNA
<213> *Candida sphaerica* ATCC 2504

<400> 428
agttaaaggc tgaagagaga agaggatat ccatcgatat cgctttgttg aagttcgaaa 60
ctccaaagta ccaagttacc gttatcgatg ctccagggtc cagagatttc atcaagaaca 120
tgattactgg tactttctcaa gctgactgtg ctatcttgat tattgctggg ggtgtcgggtg 180
aattcgaagc cggatatctcc aaggatgggc aaaccagaga acacgctttg ttggctttca 240
ccttgggtgt tagacaattg attgttgctg ttaacaagat ggattccgtt aagtgggatg 300
aatctcgttt ccaagaaatt gtcaaggaaa cctctaactt catcaagaag gtcggttaca 360
acccaaagac tgttccattc gtcccaatct ctggttggaa cggtgacaac atgattgaag 420
ccaccaccaa tgcctcatgg tacaagggtt gggaaaagga aaccaagtcc ggtgtcgtca 480
agggttaagac cttgttgga gctattgacg ctatcgaacc accatccaga ccaactgaca 540
agccattgag attgccattg caagatgtct acaagattgg tggatcggga actgtgccag 600
tcggtagagt cgaaaccggt gttatcaagc caggtatgat tgttaccttt gccccagccg 660
gtgttactac tgaagttaag tccgtcgaaa tgcaccacga acaattggaa gaaggtctac 720
caggtgacaa cgctcggtttc aacgtcaaga acgtttccgt taaggaaatc agaagaggta 780
acgtctgtgg tgactccaag aacgatccac caaaggctgc tgcttctttc aacgccactg 840
ttatcgctct gaaccatcca ggtcaaactc ctgctgggta ctctccagtt ttggattgtc 900
acactgctca cattgcttgt aagttcgacg aattgttggg aaagaacgat agaagatccg 960
gtaagaagtt ggaagactct ccaaagttct tgaagtccgg tgatgctgct ttggttaagt 1020
tcgttccatc taagccaatg tgtgttgaag ctttctctga ctaccacact ctaggtagat 1080
tcgctgtcag aga 1093

<210> 429
<211> 1094
<212> DNA
<213> *Candida tropicalis* ATCC 13803

<400> 429
aaattgaagg ctgaaagaga aagaggatat accattgata tcgctttgtg gaaattcgaa 60
actccaaaat accacgttac cgttattgat gctccagggtc acagagattt catcaagaac 120
atgattactg gtacttccca agctgattgt gctattttga ttattgctgg tgggtactgg 180
gaattcgaag ctggtatttc taaagatggg caaaccagag aacacgcttt gttggcttac 240
accttgggtg tcaaacaatt gattgttgct gtcaacaaga tggactctgt taaatgggac 300
aaaaacagat ttgaagaaat tatcaaggaa acttctaact tcgtcaagaa ggttggttac 360
aaccctaagg ctgttccatt cgttccaatc tctggttggg atggtgacaa catgattgaa 420
gcttctacca actgtccatg gtacaagggt tgggaaaaag aaaccaaggc tggtaagggt 480
accggttaaga ctttgttggg agccattgat gctattgaac caccttcaag accaactgac 540
aagccattga gattgccatt gcaagatggt tacaagattg gtggtattgg tactgtgcca 600
gtcggtagag ttgaaactgg tgcatcaaa gccggtatgg ttgttacttt cgccccagct 660
ggtgttacca ctgaagtcaa atccgtcgaa atgcaccacg aacaattggc tgaagggtgc 720
ccaggtgaca atgttgggtt caacgttaag aacgtttctg ttaaagaaat tagaagaggt 780
aacgtttgtg gtgactccaa gaacgatcca ccaaagggtt gtgactcttt caacgctcaa 840
gttattgtct tgaaccaccc aggtcaaact tctgctggtt actctccagt cttggattgt 900
cacactgctc atattgcttg taaattcgac accttgggtg aaaagattga cagaagaact 960
ggtaagaaat tggaagaaaa tccaaaattc gtcaaattcc gtgatgctgc tattgtcaag 1020
atggttccaa ccaaaccaat gtgtgttgaa gctttcactg actaccaccc attaggtaga 1080
ttcgtgtcga gaga 1094

<210> 430
<211> 1095
<212> DNA
<213> *Candida utilis* strain Csp 388

<400> 430
caagcttaaa gctgagagag agagagggtat cactatcgac attgctctct ggaagttcga 60
gactccaaag taccacgtta ctgtcattga tgccccagg cagagagatt tcatcaagaa 120
catgattact ggtacctccc aggctgactg tgctattctt atcattgccg gtgggtgttg 180
tgagttcgag gctggtatct ctaaggatgg tcagaccaga gagcacgctt tgctcgcttt 240
cacccttggg gttagacaga tgattgttgc tatcaacaag atggactctg tcaagtggga 300
cgagaagaga ttcgaggaga tcgttaagga gacctctaac ttcacaaaga aggttgggta 360

caacccaaag	actgttccat	ttgtcccaat	ttcyggttgg	aacgggtgaca	acatgattga	420
ggcctctacc	aactgtccat	ggtacaaggg	ttgggagaag	gagaccaagg	ctgggtgtgt	480
caagggtaag	accttgctcg	atgccattga	cgccattgag	ccaccaacaa	gaccaactga	540
caagccattg	agattgccac	tccaggatgt	ctacaagatt	ggtgggtatcg	gaactgttcc	600
agtcggtaga	gtcagagaccg	gtgtcatcaa	gccaggatg	ggtgttacct	ttgccccatc	660
cgggtgtcacc	actgagggtta	agtccgtcga	gatgcaccac	gagcagcttg	ctgaggggtat	720
cccagggtgac	aacggttggtt	tcaacgttaa	gaacgtctct	gttaaggaga	tcagaagagg	780
taacggtgccc	ggtgactcca	agaacgaccc	accacagggt	gctgagtcct	tcaacgctca	840
ggtcattgtc	ttgaaccacc	cagggtcagat	ctctgctggg	tactctccag	ttttggactg	900
tcacaccgcc	cacattgctt	gtaagttctc	tgagcttttg	gagaagattg	acagaagatc	960
cggtaagtc	cttgaaggcct	ctccaaagtt	cgtcaagtct	ggtgatgccg	ctatcgtcaa	1020
gatggttcca	tccaagccat	tgtgtgttga	ggccttcact	gactaccac	cactcggtag	1080
attcgctgtc	agaga					1095

<210> 431

<211> 1085

<212> DNA

<213> Candida viswanathii ATCC 28269

<400> 431

gctgaaagag	aaagaggtat	caccatcgat	atcgctttgt	ggaaattcga	aactccaaar	60
taccacgtta	ccgtcattga	ygctccaggt	cacagagatt	tcatcaagaa	catgatyact	120
ggtactttctc	aagctgattg	tgctatytgt	attatcgctg	gtgggtactgg	tgaattcgaa	180
gctgggtatyt	ctaaggatgg	tcaaaccaga	gaacacgctt	tggtggccta	caccttgggt	240
gtcaagcaat	tgattgttgc	tgtcaacaag	atggactctg	tcaaattggga	caagaacaga	300
ttcgaagaaa	tcatcaagga	aacctccaac	ttcgtcaaga	aggttgggtta	caacccaaag	360
actgttccat	tctgtcccaat	ctctggttgg	aacgggtgaca	acatgattga	agcctccacc	420
aactgcccac	ggtacaaggg	ttgggaaaa	gaaaccaagg	ctggtaaggt	taccggtaag	480
actttgttgg	aagccattga	cgctatcgaa	ccaccaacca	gaccaactga	caagccattg	540
agattgccat	tgcaagatgt	ctacaagatt	ggtgggtatcg	gaactgtgcc	agtcggtaga	600
ggtgaaactg	gtgtcatcaa	ggccgggtatg	gttgtcactt	tygccccagc	tggtgttacc	660
actgaagtca	agtccgttga	aatgcaccac	gaacaatttg	ctgaaggtgt	cccagggtgac	720
aacggttggtt	tcaacgtcaa	gaacgtttcc	gtcaaggaaa	tcagaagagg	taacgtctgt	780
ggtgactcca	agaacgaccc	accaaagggt	tgtgastctt	tcaacgctca	agtcattgtc	840
ttgaaccacc	caggtcaaat	ctctgctggg	tactctccag	tcttggattg	tcacactgcc	900
cacattgctt	gtaagtttga	caccttgggt	gaaaagattg	acagaagaac	cggtaagaag	960
ttggaagaaa	acccaaagtt	tgtcaagtc	ggtgacgctg	ctatcgtcaa	gatgggtccc	1020
accaagccaa	tgtgtgttga	agcyttcact	gactaccac	cattgggtag	attcgctgtc	1080
agaga						1085

<210> 432

<211> 1072

<212> DNA

<213> Candida zeylanoides ATCC 7351

<400> 432

aggtattacc	attgacattg	ccttggtgaa	gttcgagacc	cccaagtacc	aggtcaccgt	60
cattgacgct	cctggccaca	gagatttcat	taagaacatg	atcactggta	cctcccaggc	120
tgactgtgcc	atcttgatca	ttgctgggtg	tggtgggtgag	ttcgaggctg	gtatctccaa	180
ggatggccag	accagagagc	acgccttgct	tgccacacc	ttgggtgtca	agcaattgat	240
tgttgctgtc	aacaagatgg	actccgtcaa	gtgggacaag	aacagattcg	aggagattgt	300
caaggagacc	tccaacttcg	tcaagaaggt	tggttacaac	cccaagactg	tccccctcgt	360
tcccatctcc	ggttggaaacg	gtgacaacat	gattgaggcc	tccaccaact	gcccttggtta	420
caaggggttgg	gagaaggaga	ccaaggccgg	taaggctact	ggtaagacct	tggtggaggc	480
tattgacgcc	attgagcccc	ccaccagacc	caccgacaag	cccttgagat	tgcccttgca	540
ggatgtctac	aagattgggtg	gtattggaac	ggtgcccgtt	ggcagagttg	agaccggcat	600
catcaaggcc	ggtatgggtg	tcacctttgc	ccccgctggg	gtcactactg	aagtgaagtc	660
tgctcgagatg	caccacgagc	aattggctga	gggtgtccca	ggtgacaatg	ttgggttcaa	720
cgtgaagaac	gtttccgtta	aggagatcag	aagaggtaac	gtttgcgggtg	actccaagaa	780
cgaccccccc	aaggctgctg	cttctttcaa	cgcccagggt	atcgtcttaa	accaccccg	840
tcaaactctct	gctggttact	ctccggtttt	ggattgccac	actgcccaca	ttgcttgacg	900
attcgaccag	ttgattgaga	agatcgacag	aagaaccggg	aagaagatgg	aggacgaccc	960
taagttcatc	aagtccgggtg	acgctgccat	cgtcaagatg	gttccttcca	agcccatgtg	1020
tggttagggcc	ttcactgact	accctccctt	gggtcggttc	gctgtcagag	ac	1072

<210> 433
 <211> 751
 <212> DNA
 <213> *Coccidioides immitis* strain Silveira

<400> 433
 agcaccaact ggtccgagcc tcgtttcaac gaaatcgta aggaagtctc caacttcata 60
 aagaaggctc gatacaaccc caaggctgtt ccattcgtec ccattctctg tttcgaagg 120
 gacaacatga ttcaaccctc caccaacgct ccttggtaca agggctggaa caaggagacc 180
 gcctctggca agcacactgg caagaccctc ctgcagccca ttgatgccat cgacccccca 240
 acccgcccc cccgagaagcc cctccgtctc ccacttcagg atgtgtacaa gatctctggt 300
 atcggaaacag tcccagtcgg ccgtgtcgaa accggtgtta tcaagcctgg tatggttgtg 360
 accttcgctc cttccaacgt caccactgaa gtcaagtccg tcgaaatgca ccaccagcag 420
 ctaccccagg gtaaccctgg tgacaacggt ggcttcaacg tcaagaacgt ctctgtcaag 480
 gaagtccgccc gcggtaacgt cgctggtgac tccaagaacg acccaccaaa gggctgccc 540
 tctttcaacg cccagggtcat cgtcctcaac caccctgggt aagtcgggtg tggttatgcc 600
 ccagtccttg actgccacac tgcccacatt gcttgcaagt tctccgagct cctcgagaag 660
 atcgaccgcc gtaccggtaa atccgttgag aacaacccca agttcatcaa gtctggtgat 720
 gccgctatcg tcaagatggt tccatccaag c 751

<210> 434
 <211> 1146
 <212> DNA
 <213> *Cryptococcus albidus* ATCC 66030

<400> 434
 aagctcaagg cccgagcgaga gccgaggtatc accatcgaca tcgccttgtg gaagttcgag 60
 acccccaagt acaatgtcac cgtcattgac gcccccggtc accgagactt catcaagaac 120
 atgatcaccc gtacctcgca ggccgactgt gccatcctca tcatcgctc cggtatcgga 180
 gagttcgagg ctggtatctc caaggacggt cagaccccgag agcacgccct tttggccttc 240
 accctcggtg tccgacagct catcattgcc atcaacaaga tggacacctg caaggttagt 300
 tcgcagggtcc tgggtctctgt acgaatcttg ctgacccctt ttacagtggg ccgaagaccg 360
 atacaacgaa atcgtcaagg aggtctccgg tttcatcaag aaggtcggat acaaccccaa 420
 gaccgttccc ttctgtcccca tctccggatg gcacggagac aacatgtttg aggagtccac 480
 caacatgccc tgggtacaagg gatggcacaa ggagtcacaag gccggtgttg tcaagggaaa 540
 gaccttgctc gaggccatcg acgccatcga gccccctacc cgaccttccg acaagccctt 600
 gcgattgccc ctccaggatg tctacaagat cgggtggtat ggtcgtcacc ttcgcccctg ccaacgtcac 720
 agtcgagacc ggtgtcatca aggtcgggtat ggtcgtcacc ttcgcccctg ccaacgtcac 780
 caccgaagtc aagtcctgctg aaatgcacca cgaacagctc gctgaggggtg ttcccgggtg 840
 caacgtcggg ttcaacgtca agaacgtttc cgtcaaggac atccgacgag gaaacgtctg 900
 ctccgactcg aagaacgacc ccgctatgga gtctgcttcc ttcaacgctc aggtcattgt 960
 cttgaaccac ccgggtcaga tcgggtgccg ctactcccc gttttggact gccacaccgc 1020
 tcacattgcc tgcaagttcg ctgagctcgt tgagaagatc gaccgacgaa ccggttaagg 1080
 catggaggcc gcccccaagt tcgtcaagtc cggtgacgcc gccatcgta agttgatccc 1140
 gtccaagccc atgtgtgtcg agtcctactc cgagtacccc cccttgggtc gattcgccgt 1146
 ccgaga

<210> 435
 <211> 1095
 <212> DNA
 <213> *Exophiala jeanselmei* ATCC 64755

<400> 435
 caagctgaag gccgagcggtg agcgtggtat caccatcgat atcgccctgt ggaagttcga 60
 gactcccaag tactatgtca ctgtcatcga cggccctggt catcgtgact ttatcaagaa 120
 catgatcact ggtacttccc aggtgactgt cgccattctc atcattgcgg ccggtactgg 180
 tgaattcgaa gccggtatct ccaaggatgg tcagactcgt gagcacgctc tgctcgcta 240
 caccctgggt gtcaagcagc tcattgtcgc catcaacaag atggacacca ccaagtggtc 300
 cgaggatcgt ttcaacgaaa tcatcaagga gacttcagc ttcatacaga aggtcggcta 360
 caaccccaag tcggttcctt tcgtccccc cctccgcttc aacggtgaca acatgatcga 420
 tgtctccacc aactgcccct ggtacaaggg ctggggagaag gagaccaagg ctggcaaggc 480
 ctctggcaag actctcctcg aggccatcga cgccatcgac cccccactc gtcccaccga 540
 caagcctctc cgtcttcctc tccaggatgt ctacaagatc tctggtatcg gaacggtgcc 600

cgctcggtcg	ggtgagactg	gtgtcatcaa	ggccggtatg	gtcgttacct	tcgctcctgc	660
caacgtcacc	actgaagtca	agtcgcgcga	aatgcaccac	gaacaactcg	ccgaggggtg	720
tccaggtgac	aacgttgggt	tcaacgtcaa	gaacgtctcc	gtcaaggagg	ttcgctcggtg	780
aaacgtctgc	ggtgactcca	agaacgaccc	acccaagggt	gctgattcct	tcaacgccc	840
ggtcatcgtc	ttgaaccacc	ctggtcaagt	cggtgctggc	tacgccccag	tgttggttg	900
ccacactgcc	cacattgctt	gcaagttctc	tgagcttctc	gagaagattg	accgccgtac	960
cggtaaatcc	atcgaaaaca	accccaagtt	catcaagtct	ggtgacgctg	ccatcgtaaa	1020
gatgggtccc	agcaagccca	tgtgtgttga	ggccttcact	gactaccac	ctcttggtcg	1080
tttcgcgcgc	cgtga					1095

<210> 436
 <211> 1113
 <212> DNA
 <213> *Fusarium oxysporum* strain WSA-212

<400> 436						
aagctcaagg	ccgagcggtg	gcgtgggtatc	accatcgata	ttgctctctg	gaagttcgag	60
actcctcgct	actatgtcac	cgtcattgggt	atgttgctgc	tcattgcttca	ttctacttct	120
cttcgtacta	acacatcact	cagacgctcc	cggtcaccgt	gatttcatca	agaacatgat	180
cactgggtact	tcccaggccg	attgcgccat	tctcatcatt	gccgcccgtg	ctgggtgagtt	240
cgaggctggt	atctccaagg	atggccagac	ccgtgagcac	gctcttcttg	cctacaccct	300
tgggtgtcaag	aacctcatcg	tgcctcatca	caagatggac	accaccaagt	ggtctgaggc	360
ccgttaccag	gagatcatca	aggagacctc	ctctttcatc	aagaaggctc	gctacaaccc	420
caaggctgtc	gctttcgctc	ccatctccgg	tttcaacggg	gacaacatgc	ttacccctc	480
caccaactgc	ccctgggtaca	agggttggga	gcgtgagatc	aagtcgggca	agctcactgg	540
caagaccctc	ctcgaggcca	ttgactccat	cgagcccccc	aagcgtccc	ttgacaagcc	600
ccttcgtctt	ccccttcagg	atgtctacaa	gatcggtggt	attggaacgg	ttcccgctcg	660
ccgtatcgag	actgggtgtca	tcaagccccg	tatggtcggt	accttcgctc	cttccaacgt	720
caccactgaa	gtcaagtcgg	tcgagatgca	ccacgagcaa	ctcactgagg	gccagcccgg	780
tgacaacggt	ggtttcaacg	tgaagaacgt	ctccgtcaag	gacatccgac	gtggtaacgt	840
cgctgggtgac	tccaagaacg	acccccctat	gggtgcccgt	tctttcaccc	cccagggtcat	900
cgctcctcaac	caccccggtc	aggctcggtgc	tggttacgct	cccgtcctcg	attgtcacac	960
tgcccacatt	gcctgcaagt	tgcgcgagat	ccaggagaag	atcgaccgcc	gaaccggtaa	1020
ggctactgag	gccgccccca	agttcatcaa	gtctgggtgac	tccgccatcg	tcaagatggt	1080
tccctccaag	cccattgtgtg	ttgaggcttt	cac			1113

<210> 437
 <211> 726
 <212> DNA
 <213> *Geotrichum* spp. strain LEV-4

<400> 437						
ggtccgagga	cagattcaac	gagattgtca	aggagacttc	caacttcatc	aagaagggtg	60
ggtayaaccc	caagactggt	gctttcgctc	ccatctctgg	ttggaacggg	gacaacatga	120
ttgagccctc	caccaactgc	ccctgggtaca	agggatggca	gaaggagacc	aaggctgggtg	180
tcactaaggg	taagaccctc	cttgaggcca	tcgatgccat	tgagccccct	gtcagacctt	240
ccgacaagcc	cctccgtctt	cccctccagg	atgtctacaa	gatcggtggt	atcggaactg	300
tgcccgtcgg	ccgtgtcgaa	accggtgtca	tcaaggccgg	tatggtcgct	accttcgccc	360
ccgctgggtg	caccactgaa	gtcaagtcgg	tcgagatgca	ccacgagctc	ctcactgagg	420
gtctccccgg	tgacaacggt	ggtttcaacg	tcaagaacgt	ctccgttaag	gatatcagac	480
gtggtaacgt	ctgcgggtgac	tccaagaacg	atccccccaa	ggcttgcgct	tctttcaacg	540
cccagggtcat	tatcttcaac	caccctgggtc	agatctctgc	tgataactct	cccgtccttg	600
attgccacac	cgcccatatt	gcttgcaagt	tgcacacttt	gatcgagaag	attgaccgtc	660
gtactggtaa	gaagactgag	gactccccca	agttcgtcaa	ggccgggtgat	gctgctatcg	720
tcaaga						726

<210> 438
 <211> 754
 <212> DNA
 <213> *Histoplasma capsulatum* strain G186A5

<400> 438						
caccaccaag	tggtccgagt	cccgtttcaa	cgaaatcatc	aaggagggtt	ccaacttcat	60

caagaaggtc	ggatataacc	ccaaggctgt	tcccttcgtg	ccaatctctg	gtttcgaggg	120
tgacaacatg	attgaaccct	cccccaactg	cacatggtac	aagggctgga	acaaggagac	180
tgctcttggc	aagtcttctg	gtaaaaccct	tctcgatgcc	attgacgcca	ttgaaccccc	240
aaccgcgtct	accgataagc	ccctccgtct	tccctccag	gatgtgtaca	aaatctctgg	300
tattggcact	gttcccgtcg	gacgtgttga	gactgggtgc	atcaagccc	gtatggctcg	360
gactttcgct	ccctccaacg	tcaccactga	agtcaagtcc	gtcgaaatgc	accaccaaca	420
actccaggct	ggttaccctg	gcgacaacgt	cggcttcaac	gtcaagaacg	tttcagtcaa	480
ggaagtccgc	cgtggcaacg	ttgctggcga	ctccaaaaat	gatcccccta	agggtcgca	540
atccttcaat	gcccagggtca	tcgtccctaa	ccaccccggc	caggttggcg	ctgggtatgc	600
cccagtcctc	gactgccaca	ctgcccacat	tgcttgcaag	ttctctgagc	ttattgagaa	660
gacgcaccgc	cgtaccggaa	agtctgttga	gaacaacccc	aagttcatca	agtctggtga	720
tgctgctatc	gtcaagatgg	ttccctccaa	gccc			754

<210> 439
 <211> 743
 <212> DNA
 <213> *Issatchenkia orientalis* ATCC 6258

<400> 439						
tgggatgaaa	acagatttga	agaaattgtc	aaggaaaccc	aaaacttcat	caagaaggtt	60
ggttacaacc	caaagactgt	tccattcgtt	ccaatctctg	gttgggaatg	tgacaacatg	120
attgaagcat	ccaccaactg	tccatggtac	aaggggttga	ctaaggaaac	caaggcaggt	180
gttggttaagg	gtaagacctt	attagaagca	atcgatgcta	ttgaaccacc	tgtagacca	240
accgaaaagc	cattaagatt	accattacaa	gatgtttaca	agattgggtg	tattggtact	300
gtgcagctcg	gtagagtcga	aaccgggtgc	attaagccag	gtatggttgt	cacttttgct	360
ccagcaggtg	tcaccaccga	agtcaartcc	gttgaaatgc	accatgaaca	attagaacaa	420
ggtgttccag	gtgataacgt	tggtttcaac	gttaagaacg	tctctgtcaa	ggatatcaag	480
agaggtaacg	tttgtgggtga	ctccaagaac	gaccaccaa	tgggtgcagc	ttcyttcaat	540
gctcaagtca	ttgtcttgaa	ccaccctgg	caaatttccg	ctgggtactc	tccagtcttg	600
gattgtcaca	ctgcccacat	tgcatgtaag	ttcgacgaat	taatcgaaaa	gattgacaga	660
agaactggta	agtctgttga	agaccatcca	aagtcygtca	agtctggtga	tgcagctatc	720
gtcaagatgg	tccaaccaa	gcc				743

<210> 440
 <211> 1091
 <212> DNA
 <213> *Malassezia furfur* ATCC 42132

<400> 440						
caagctcaag	gctgagcgtg	agcgtgggtat	caccatcgac	attgctctgt	ggaagttcga	60
gacccctaag	taccacgtta	cogtcattga	cgctcctgg	caccgtgact	tcatcaagaa	120
catgattacg	ggtacctcgc	aggctgactg	cgctatcctc	atcattgccg	gtggtagccg	180
tgagttcgag	gctggtatct	cgaaggacgg	tcagaccctg	gagcacgctc	tgctcgcttt	240
caccctgggt	gtgctgcagc	tcattgtggc	cgtcaacaag	atggacacca	ccaagtactc	300
ggaggaccgc	ttcaacgaga	ttgtccgcga	agtgtcgaac	ttcatcaaga	aggctcggtt	360
caaccccaag	actgttgctt	tcgtcccat	ctcgggtgg	cacggtgaca	acatgatcga	420
ggccaccacc	aacatgcctt	ggtacaagg	ctgggagaag	gagaccaagt	cgggcaaggt	480
cactggttaag	actctgctgg	acgccatcga	cgccatcgag	ccccgaccc	gccccactga	540
caagcccttg	cgtctccctc	tcgaggatgt	gtacaagatc	ggtgggtatcg	gtactgtccc	600
tgctcggtcgt	gttgagaccg	gtgtgatcaa	gcccgggtatg	gttggtgacct	tcgctccctc	660
gaacgtcacc	actgaagtta	agtcgggtga	gatgcaccac	gagtcgctcc	ctgaggggtct	720
ccccgggtgac	aacgtttggt	tcaacgtgaa	gaacgtctcg	gttaaggaca	ttcgccgtgg	780
taacgtttgcc	tcggactcga	agaacgaccc	cgctcaggag	gctgcttcgt	tcaacgcgca	840
ggtcattgtc	atgaaccacc	ctggtcagat	cagcaacggt	tactcgcccc	tgcttgactg	900
ccacactgcg	cacattgcct	gccgcttcaa	caacatcctc	cagaagatcg	accgtcgctc	960
gggtaagggt	cttagaggaga	accccaaggt	catcaagtcg	ggtgacgctg	ccatggtgga	1020
gatgatcccc	accaagccca	tgtgtgtgga	gtcgttcaac	gagtaccccc	ctctgggtcg	1080
tttcgctgtg	c					1091

<210> 441
 <211> 749
 <212> DNA
 <213> *Malassezia pachydermatis* ATCC 42756

<400> 441
accaccaagt actcggagga ccgcttcaac gagattattc gcgagacttc gaacttcate 60
aagaaggtcg gttacaaccc gaagactggt gccttcgctc cgatctcggg ctggcacggt 120
gacaacatga ttgagggcag caccaacatg ccgtggtaca agggctggga gaaggagacc 180
aagtcgggca agggcactgg taagaccctt ctggacgcta ttgacgccat tgagccgccc 240
acgcgcccga ccgacaagcc tctccgtctt cctctccagg atgtgtacaa gatcgggtggt 300
atcgggtacyg tcccggctcg ccgtgttgag accggtgtta tcaagcccgg tatggttgtg 360
accttcgctc cgtcgaacgt cacsactgaa gttaagtcgg tcgagatgca ccacgagcag 420
atccctgagg gtcttcgggg tgacaacggt ggtttcaacg tgaagaacgt gtcgggtcaag 480
gacattcgcc gtggttaacgt cgctcgggac tcgaagaacg acccggtca ggaggctgcc 540
tcgttcaatg ctcaggatcat tgtgatgaac caccctgggt agatcagcaa cggttactcg 600
ccrgtgctcg actgccacac tgctcacatt gcctgccgct tcaacaacat cctccagaag 660
atcgaccgtc gttcgggtaa ggttctygaa gagaacccca agttcatcaa gtcgggtgac 720
gctgccatgg ttgagatgat cccgaccaa 749

<210> 442
<211> 1150
<212> DNA
<213> Malbranchea filamentosa ATCC 48174

<400> 442
actgaaggcc gagcgtgagc gtggtatcac catcgatata gccctctgga agttcgagac 60
ccccaaagta catgtcaccg tcattggtac gttcgacatg ttcgaccttt tgcctagtgt 120
cccccttctaa ccacagttta tagacgcccc tggccatcgt gatttcgtca agaacatgat 180
cactgggtact tcccaggctg attgcgctat cctcatcatt gcttccggca ctgggtgaatt 240
cgaggctggt atctccaagg atggccagac ccgtgagcac gctctgcttt ccttcaccct 300
cggtgttagg cagctcattg tcgccctcaa caagatggac actgtcaact tcgctgaggg 360
ccgttacaac gagattgtca aggaagtctc caacttcate aagaaggctcg gctacaaccc 420
caaggccggt cctttcgtcc ccatctccgg tttcgagggt gacaacatga tcgaggccctc 480
caccocgcat ccttgggtaca agggctggaa caaggagacc gccagtggca agagcaccgg 540
caagacccty ctcgaggcca ttgatgccat cgaacccccg gtccgtccca ccgacaagcc 600
cctycgtctc cctcttcagg atgtgtacaa gatctccggt attggcactg ttcctgtcgg 660
tcgtgttgag actgggtgtca tcaagcctgg tatggtcggt actttcgccc ccgccaacgt 720
caccactgaa gtcaagtcgg tcgagatgca ccaccagcag ctccaggccc gtaaccccgg 780
tgacaacgtc ggcttcaacg tcaagaacgt ttccgtcaag gaagtccgcc gtggcaacgt 840
tgctccgac tccaagaacg accccgccaa gggctgcgac tccttcaacg cccagggtcat 900
cgtccttaac caccocgggtc aggtcgggtgc tggatacgt cccgtcctcg attgccacac 960
tgcccacatt gcttgcaagt tctctgagct tcttgagaag atcgatcgcc gtaccggtaa 1020
atccggttag gaccaccca agttcatcaa gtctgggtgat gccgctatcg tcaagatggg 1080
tccctccaag cctatgtgag ttgaggcttt cactgactac cctccccttg gtcgtttcgc 1140
cgtccgtgac 1150

<210> 443
<211> 1099
<212> DNA
<213> Metschnikowia pulcherrima DSM 70336

<400> 443
ggacaagttg aaggctgaga gagagagagg tatcaccatc gacattgcct tgtggaagtt 60
cgagactcct aagtaccacg tcaccgtyat tgacgccccca ggtcacagag atttcatcaa 120
gaacatgate actggtactt cccaggctga ctgtgcyatc ttgattatcg cyggtggtgt 180
tggtgagttc gaggtggta tctccaagga tggccagacc agagagcacg ctttgttggc 240
ytacaccttg ggtgttagac arttgattgt tgccgtcaac aagatggact ctgtcaagtg 300
ggacaagaac agatttgagg agatcatcaa ggagacctct aacttcgtca agaaggttgg 360
ttacaaccct aagacygtgc cattcgtgcc aatyctctgg tggaaacggtg acaacatgat 420
tgaggcytcc actaactgcc catggtacaa ggggtggag aaggagacca aggcgggtaa 480
gtctwccggt aagaccttgt tggaggccat tgacgccatt gagccaccaa ccagacctac 540
cgacaaggcc ttgagattgc ctttgcagga tgtctacaag atcggtggta tcggaacggt 600
gccagtcggc cgtgtcgaga ccggtgtcat taaggccggt atggttgya ccttygccc 660
agctgggtgc accactgagg tcaagtcctg cgagatgcac tggtcgaggg 720
tcttccagg gacaaygttg gtttcaacgt caagaacgtc tccgttaagg agatcagaag 780
aggtaacgtc tgtggtgact ccaagcagga cccaccaaag ggtgccgctt ctttaccgc 840
ycaggttatt gtgttgaaac accctgggtc gatctcctct ggttactctc cagtgttggg 900
ctgycacacc gccacattg cctgtaartt cgacaccttg ttggagaaga ttgacagaag 960

aactggtaag tccttggagt cygagcctaa gttcgtcaag tcyggtgacg ccgccattgt 1020
caagatgggtg ccaaccaagc caatgtgtgt tgaggctttc accgactacc cacctttggg 1080
tagattcgcc gtcagagac 1099

<210> 444
<211> 1153
<212> DNA
<213> *Paecilomyces lilacinus* ATCC 42570

<400> 444
caagctcaag gccgagcgtg agcgtggtat caccatcgac attgccctct ggaagttcga 60
gactcccaag tactatgtca ccgtcattgg tacgtcgact cgcgcgagac tggtcgcaat 120
ttccacgtcg ctaacgtgct tgaacagacg ctcccggcca ccgtgacttc atcaagaaca 180
tgatcactgg tacctcccag gctgactgcg ctatcctcat tatcgctgcc ggcaactggtg 240
agttcgaggc tggatatctcc aaggatggcc agacccgtga gcacgctctg ctgccttaca 300
ccctcggtgt taagcagctc atcgtcgcta tcaacaagat ggacaccacc aagtggctctg 360
aggcccgttt ccaggagatc atcaaggaga cctccaactt catcaagaag gtcgggtaca 420
acccaagac cgtcgctttc gtcccatct ctggtttcca cggcgacaac atgctttccc 480
cctccacca ctgcccctgg tacaagggtt gggagaagga gaccaaggct ggcaagtcca 540
ccggcaagac cctccttgag gccatcgact ccacgagcc cccaagcgc cccagcgaca 600
agccccctcg ccttcccctt caggatgtgt acaagatcgg cggatcggc acagtccctg 660
tcggcgtgat cgagactggt gtcatacagc ccggcatggt cgtgaccttc gctccttcca 720
acgtcaccac cgaagtcaag tccgttgaga tgcaccacga gcagctctcc gaggggtgctc 780
ccggtgacaa cgtcggtctc aacgtcaaga acgtctccgt caaggagatc cgtcgtggca 840
acgtcgccgg tgactccaag aacgaccccc ctctgggtgc cgcttctttc gatgccagg 900
tcactgctct caaccacccc ggccagggtc gtgctggcta cgcgcccgtc ctcgactgcc 960
acacgcccc cattgctgc aagttcgcc agatcaagga gaagatcgac cgcggtaccg 1020
gcaagtctgt cgagtcggcc cccaagttca tcaagtctgg cgactctgcc atcgtcaaga 1080
tgattccctc caagcccatg tgcgttgagg ctttcaccga ctaccctcct ctgggcccgt 1140
tcgcccgtccg tga 1153

<210> 445
<211> 763
<212> DNA
<213> *Paracoccidioides brasiliensis* ATCC 32071

<400> 445
taccactaag tgggtccgaga cccgattcaa tgaaattatc aaggaagtca ccaatttcat 60
taagaaggtc gatatataacc ccaagactgt tcctttcgtt cccatttctg gtttcgaggg 120
tgacaacatg atcgagccct ctgccaaactg cccatggtag aagggtggtt ccaaggagac 180
tgctcagggc aagtactctg gcaagaccct tcttgaggcc atcgacgcca ttgagcccc 240
caccgctcct accgataaac ctctccgtct tcccctccag gatgtctaca agatctccgg 300
tattggcact gttcctgtcg gacgtgttga gactggagtc atcaagcccc gtatggtcgt 360
gaccttcgct cccgccaaacg tcaccactga agtcaagtc gtcgaaatgc accaccagca 420
gcttaccgcc ggtaaccccc gtgacaacgt cggcttcaac gtcaagaatg ttccggtcaa 480
agaagtccgc cgtggtaacg ttgccggtga ctctaagaat gatccccc aaaggctgcga 540
ttccttcaat gccagggtca tegtccctcaa ccacctgggt cagggttggcg ctggttatgc 600
cccagtcctc gactgccata ctgcccacat tgcttgcaaa ttcgctgagc tccttgagaa 660
gattgatcga cgaaccggaa agtctgttga gaacaacccc aagttcatca agtccggtga 720
tgctgctatc gtcaagatga ttccttccaa gcccattgtc gtc 763

<210> 446
<211> 1346
<212> DNA
<213> *Penicillium marneffeii* ATCC 64101

<400> 446
aagctcaagg ctgagcgtga gcgtggtatc accatcgata ttgctctctg gaagttccag 60
actgccaaag acgagggtac cgtcattgac gccccggtc accgtgattt catcaagaac 120
atgatcactg gtacctccca ggccgattgc gctatttctc tcattgcctc tggtaggtg 180
gaattcgagg ctggtatctc caaggatggc cagactcgtg agcacgctct tttggctttc 240
accctcggtg tccgtcagct cattgttgcc ctcaacaaga tggacacttg caagtggctc 300
cagggtgagt actcgtaact gcgtttggcc ttgaatatct tactaatgca ccatagatcg 360

```
ttacaacgaa attgtcaagg agacttccaa cttcatcaag aaggtcggat acaaccccaa 420
gaacgttcct ttcgttccta tctcgggttt caacggtgac aacatgcttg agccctcccc 480
caactgcccc tggtagaagg gttgggagaa ggagaccaag gccggttaagg tcaactggtaa 540
gaccctcctc gaggccatcg acgccattga gccccctacc cgtcccgcca acaagggttag 600
tccctcctcg actactcaaa cctcctcat aagttcagat tactgactcg ttcacagccc 660
ctccgtcttc cctccagaa tgtctacaag atcgggtggta ttggaacggg tcccgtcggg 720
cgtgttgaga ctggtaccat cgttcctggg atggttggtc ccttgtaagt cactctcctc 780
gcttatacta cctgaaatca tcatgtgcta acttgacact cagcgtcccc gccaacgtca 840
ccactgaagt caagagtgtt gaaatgcacc accagcagct cactgccggg cagcccggtg 900
acaacgttgg tttcaacgtg aagaacgtct cgtcaagga aatccgtcgt ggtaacgttg 960
ctggtgacag caagaacgac cccctgccc ggtcgtgcct cttcaacgcc cagggtcatcg 1020
tctcaacca ccccggtcag gtcggtgctg gttacgcccc agtcctcgat tgccacactg 1080
cccacattgc ttgcaagttc gctgagctcc tcgagaagat tgaccgtcgt accggaaagt 1140
ctgttgagga ccacccaag ttcattcaag cgggtgacgc tgccatcgct aagatgattc 1200
cttccaagcc catgtgtgtt gaggttttca ccgagatccc tctctcggg cgtttcgccg 1260
ttcgcgagta agttttatct cgtttgtcta ttttccatcc ttcctctctc ctccgtcttc 1320
catatatact ttttcagtta tatgtg 1346
```

<210> 447
<211> 1094
<212> DNA
<213> *Pichia anomala* ATCC 18205

<220>
<221> misc_feature
<222> (231)..(231)
<223> n may be any nucleotide

```
<400> 447
aagttaaaag ctgaacgtga aagaggtatc actattgata ttgcttttatg gaaattcgaa 60
actccaaaat accatgttac cgttattgat gtcacagggt acagagattt catcaaaaat 120
atgattactg gtacttccca agctgattgt gctatyttaa ttattgccgg tggattgggt 180
gaattcgaag ctggtatctc aaaagatggg caaacacagag aacacgcttt nttagcttac 240
accttaggtg ttaacaattt gattgttgct atcaacaaga tggattccgt taaatgggat 300
gaatctcgtt tcgaagaaat tgtcaaggaa acytcaaaact ttatcaagaa agttgggttac 360
aacccaaaaa ctgttccatt cgttccaatc tcagggttgg atggtgataa catgattgaa 420
ccatcawcta actgtccatg gtacaaaagg tggaaaaaag aaaccaaaagc tgggtgaagt 480
aaaggtaaaa ctttattaga agccattgat gctattgacc caccatcaag accaactgat 540
aaaccattac gtttaccatt acaagatggt tacaarattg gtggtattgg tactgtgcca 600
gtcggtagag ttgaaaccgg tgttatcaaa ccagggtatg ttgttacctt tgccccagct 660
ggtgttacca ctgaagtcac atctgttgaa atgcatcatg aacaattgac tgaagggtta 720
ccagggtgac atgttggttt caacggttaag aatgtttctg ttaaagaaat ccgtcgtggg 780
aacgtctgtg gtgactctaa aaacgatcca tctgctgggt actctccagt tttagattgt 840
gttattgtct taaaccatcc aggtcaaatt cctgctgggt actctccagt tttagattgt 900
cacactgctc acattgcttg taaatttgac actttaattg aaaaaattga cagacgtact 960
ggtaagaaat tagaagaagc tccaaaattc atcaaatcag gtgatgctgc tattgttaaa 1020
tttggtccat caaaaccatt atcagttgaa gcttttactg actaccacc attaggtcgt 1080
ttcgtgtgca gaga 1094
```

<210> 448
<211> 1100
<212> DNA
<213> *Pichia anomala* ATCC 2149

```
<400> 448
cttagataag ttaaaagctg aacgtgaaag aggtatcact attgatattg ctttatggaa 60
attcgaaact ccaaaatacc atgttaccgt tattgatgct ccaggtcaca gagatttcat 120
caaaaatatg attactggta cttcccaagc tgattgtgct atmmtaatta ttgccgggtg 180
tattgggtgaa ttcgaagctg gtatctcaaa agatgggtcaa accagagAAC acgctttrtt 240
agcttacacc ttaggtgtta aacaattgat tgttgctatc aacaagatgg attccgttaa 300
atgggatgaa tctcgttttc aagaaattgt caaggaaacy tcaaacttta tcaagaaagt 360
tggtacaacc caaaaactgt tccattcggt ccaatctcag gttggaatgg tgataacatg 420
attgaaccat caactaactg tccatgggtac aaagggttga aaaaagaaac caaagctggt 480
gaagctaaag gtaaaacttt attagaagcc attgatgcta ttgatccacc atcaagacca 540
```

```
actgataaac cattacgttt accattacaa gatgtttaca arattggtgg tattggtact 600
gtgccagtcg gtagagttga aaccggtggt atcaaaccag gtatggttgt tacctttgcc 660
ccagctgggtg ttaccactga agtcaaactc gttgaaatgc atcatgaaca attgactgaa 720
ggtttaccag gtgacaatgt tggtttcaac gttaagaatg tttctgttaa agaaatccgt 780
cgtggtaacg tctgtggtga ctctaaaaac gatccaccaaa aagctgctga atcattcaat 840
gctcaagtta ttgtctttaa ccatccagggt caaatctctg ctggttactc tccagtttta 900
gattgtcaca ctgctcacat tgcttgtaaa tttgacactt taattgaaaa aattgacaga 960
cgtactggta agaaattaga agaagctcca aaattcatca aatcagggtg tgctgctatt 1020
gttaaatttg ttccatcaaa accattatca gttgaagctt tcactgacta cccaccatta 1080
ggtcgtttcg ctgtcagaga                                     1100
```

<210> 449
<211> 1201
<212> DNA
<213> *Pseudallescheria boydii* ATCC 44331

```
<400> 449
caagctcaag gccgagcgtg agcgtggtat caccatcgat atcgccctct ggaagttcga 60
gacccccaaag taccaggtca ccgtcattgg tatgtctttg tgctttttgt gctttttgtg 120
cctgtgcctc gcacaattcc agccctcgat aattatgaac ctctactaa tatgtcgttc 180
tcccactacc cacagacgcc cccggccatc gtgatttcat caagaacatg attactggta 240
cctcccaggc tgattgcgcc attctcatca ttgcctccgg tactgggtgag ttcgaggctg 300
gcattctcaa ggatggccag acccgtgagc acgctcttct cgccttcacc ctcggtgtca 360
agaacctcat tgttgccatc aacaagatgg acaccaacaa ctgggtccgag gaccgataca 420
aggagatcat caaggagacc tccaacttca tcaagaaggt cgggtacaac cccaaggccg 480
ttcctttcgt ccccatctcc ggtttccacg gagacaacat gcttaccctc tccaccaact 540
gccccctggt caagggttgg gtccgtgagg tcaagggtaa cacccttacc ggcaagacct 600
ttctcgaggc catcgactyc atcgagcccc ccaagcgctc caccgagaag cccctccgtc 660
ttcccccttc ggacgtctac aagatcggtg gtattggcac tgtgcccgtc ggccgtatcg 720
agaccggtat cctcaagccc ggtatggtcg tcaccttcgc tccctccaac gtcaccactg 780
aagtcaagtc cgtcgagatg caccacgagc agcttaccga ggggtgtccc ggtgacaacg 840
ttggtttcaa cgtgaagaac gtctccgtca aggatatccg ccgtggcaac gtctgcggtg 900
actccaagaa cgaccccccc gctggtgccg cctcttttca ggcccaggtc attgtcctca 960
accaccccg gtcagatcggt gctgggttac ctcccgttct tgactgccac actgcccaca 1020
ttgcttgcaa gttcgccgag ctcccttgaga agatcgaccg ccgtaccggt aagtcgggtc 1080
agaacaaccc caagttcgtc aagttctggt atgccgccat cgtcaagatg gttccctcca 1140
agcccatgtg tgttgagtcc ttcaccgagt accccctctc cggtcgtttc gccgtccgtg 1200
a                                     1201
```

<210> 450
<211> 1095
<212> DNA
<213> *Rhizopus oryzae* ATCC 56015

```
<400> 450
caagcttaag gctgaacgtg aacgtggtat caccatcgat attgctctct ggaagttcga 60
aacccccaaag taccaaatta ccgttattga tgctcccgtt caccgtgatt tcatcaagaa 120
catgattacc ggtacttctc aagccgattg tgctattctt atcattgctg gtggtactgg 180
tgaattcgaa gctggtatct ccaaggatgg tcaaaccctg gaacacgccc ttttggtctt 240
cactctcggt gtccgtcaat tgattgttgc tgtcaacaag atggatacca ccaagtgggtc 300
cgaagctcgt ttcaacgaaa tygtcaagga agtttcttcc ttcatacaaga agattgggtta 360
caacccccaa tctgttccct tcgtcccat ctctggttgg cacggtgaca acatgttgga 420
agaatctacc aacatgccct ggtacaaggg atggaacaag gaaaccaagg ctggtgccaa 480
gtctggtaag accctcttgg atgccattga caacattgac cctcctaccc gtctctgtga 540
caagcctctc cgtcttcctc ttcaagatgt ttacaagatt ggtgggtatcg gtactgtccc 600
cgtcgggtcg gtcgaaactg gtgtcatcaa ggctgggtat gttgtcacct tcgctcctgc 660
tgctgtcacc actgaagtta agtcctgcga aatgcaccac gaaacctca ctgaagggtc 720
ccccgtgac aacgtcgggt tcaacgtcaa gaacgtctcc gtcaaggata tccgtcgtgg 780
taacgtctgt tctgactcca agaacgacc cgccaaggaa gccgggttct tcaccgctca 840
agtcattatc ttgaaccacc ctgggtcaaat tgggtgctggt tacgtccyg ttttggattg 900
tcacactgct cacattgcct gtaagttcgc tgaattgatc gaaaagattg acagacgttc 960
cggtaagtcc ttggaagcta ctcccaagtt cgtcaagttc ggtgactctg ccactcgtca 1020
gatgatcccc tccaagccca tgtgtgttga agcttacact gactaccctc ctctcggtcg 1080
tttcgctggt cgtga                                     1095
```

<210> 451
 <211> 1292
 <212> DNA
 <213> *Rhodotorula minuta* ATCC 10658

<400> 451
 gctgaaggcc gagcgagagc gtgggtatcac catcgatatc gctctatgga agttcgagac 60
 ccccaagtac aacgtcaccg tcattgacgc tccaggacat cgtgatttca tcaagagtga 120
 gttaaccata acatcaaaca gtgttgcaaa catcagctaa tgcattgttat gcgtccagac 180
 atgattactg gtacttccca ggccgattgc gctattctca tcatcgccac cgggtgttgg 240
 gagttcgagg ctgggtatctc caaggatggc cagacccgag agcacgccct tctcgccttc 300
 accctcgggtg tcagacagct catcgttgcc ttgaacaaga tggactcggc caaggtaggc 360
 taacttcaca acgtcggctt cccatcattc attcacttac ctgtcttgtc ttccaccctc 420
 cagttctccg agtcccagata cgatgaaatc gtcaaggaga catccgggtt catcaagaag 480
 gtccgattcg accccaaggg tgttcccttc gtcccatctc caggatggca cggagacaac 540
 atgatcgagg agtccaccaaa catgccttgg tacaagggat ggaagaagac caccaagacc 600
 ggcgagtaca agggaaagac cctgctcgag gccatcgact ccatcgagcc cccaccccg 660
 cctaccgaca agcctctccg acttcccttc caggatgtct acaagattgg tggatcggga 720
 acagtgccag tcggacgagt cgagactggg accatcaagg ctggtatggc cgtcaccttc 780
 gctccttcag ctgtcaccac cgaagtcaag tctgttgaga tgcaccacga gcagctcgag 840
 gctggctctc cagggtgacaa cgtcggattc aacatcaaga acgtttcagt caaggatata 900
 cgaagaggaa acgtctgcgg tgactccaag aacgatcccc ccaaggaggc tgcttccctc 960
 accgcccagg tcattgtcct caaccacccc ggtcaaatac gtaacggata ctctccagtt 1020
 ctcgattgcc acactgggtg gtcattcttc catattagtt tgaactcttt tgaacaatac 1080
 taacgtgaat cattatactt ttcagccccc attgcatgca agttcgacac cctcctagag 1140
 aagattgacc gacgatccgg aaagtccatc gaagataccc ccaagttcgt caagttcgtg 1200
 gacgccgcca tcgtcaagat ggtccccacc aagccaatgt gcgttgaggc ttccaccgac 1260
 taccacctc ttggacgatt cgccgtccgt ga 1292

<210> 452
 <211> 1289
 <212> DNA
 <213> *Sporobolomyces salmonicolor* ATCC 32311

<400> 452
 aagctcaagg ccgagcgtga gcgtgggtatc accatcgata tcgctctctg gaagttcgag 60
 acccccaagg tgcgttctca ccccggtgga ggagcacgca cgcgagggct cacgctgcgc 120
 ctcttacagt acatgatcac cgtcatcgac gccccgggtc accgtgactt catcaagaac 180
 atgatcaccg gtacctcgca ggccgactgc gccatcctca tcatcgccgc cggtagccgt 240
 gagttcgagg ctgggtatctc gaaggacggc cagacccgag agcacgccct cctcgccttc 300
 accctcgggtg tccgtcagct catcgtcgcc atcaacaaga tggacacgac caagtactcg 360
 gagggccggt tccgaggagt catcaaggag acctccaact tcatcaagaa ggtcggcttc 420
 aacccaaga acgtcccctt cgtccccttc cgtggatggc acgggtgaca catgattgag 480
 gagaccgcca acatgccctg gtacaaggga tggagaagg agaccaaggc cggtagggtc 540
 aagggcaaga cctcctcga cgccatcgac gcgatcgagc ccccttcgag ccctaccgac 600
 aagccccctc gtcttcccct ccaggttcgt ttccctgctc gcggtttacg ctgctacttc 660
 gagctgaccc gcgagctctg cccgaacagg atgtctacaa gatcggtggg atcggcacag 720
 tccccgtcgg ccgtgtcgag accggcacga tcaaggccgg tatggtcgtc gtcttcgccc 780
 cggccaacgt caccactgag gtcaagtcgg tcgagatgca ccacgagcag ctcgaggctg 840
 gtctcccggg agacaacgtc ggcttcaagt gcgtctcatc atgtttttgc ttcgctcggc 900
 cattttttca gtcctgaccc cgttttgccc ctgcacagcg tcaagaacgt ttcggttaa 960
 gacatccgtc gcggtaacgt ctgctgggtgac tcgaagaacg aaccccccaa ggaggccgct 1020
 tccttcaagg cccaggtcat cgtcatgaac caccctgggtc agatcggaac cggttacgct 1080
 cccgttctcg actgccacac cgcccacatt gcctgcaagt tcgacaccct cctcgagaag 1140
 atcgaccgtc gctcgggcaa gtcgattgag gacctcccca agttcgtcaa gtcgggtgac 1200
 gccgccatcg tcaagatggg tccctccaag ccgatgtgtg tcgagtcgtt cgccgagtag 1260
 cccctctcgc gacgtttcgc cgtccgtga 1289

<210> 453
 <211> 1070
 <212> DNA
 <213> *Sporothrix schenckii* strain WSA-148

<400> 453

```
gtgagcgcg tatcaccatc gatattgctc tgtggaagtt cgagaccccc aagtactacg 60
tcaccgtcat tgacgcccc ggatcatcgcg atttcatcaa gaacatgata actggtacct 120
cgcaggccga ctgcgccatt ctcatcattg ccgctggtac tgggtagattc gaggctggta 180
tctccaagga tggccagact cgtgagcacg ctctgctcgc ctacaccctg ggtgtgcggc 240
agctgatcgt cgccatcaac aagatggaca cggccaagtg ggctgaggct cgttaccagg 300
agatcatcaa ggagacctcc aacttcatca agaaggtcgg ctacaacccc aagactgttg 360
ccttcgtccc catctcgggc ttccacggcg acaacatgct tactccctcg accaactgcc 420
cctggtacaa gggctgggag aaggagggca agagcggcaa gggtaccggg aagactctgc 480
tggacgcat tgacgcgcgc gagccccca agcgcgccac ggacaagccc ctgcgtctgc 540
ccctcagga tgtctacaag atcggcggta tcggcactgt ccctgctcggc cgtatcgaga 600
ctggtgtcct gaagcccggc atggctcgtc cctttgcccc gtccaacgtc accactgaag 660
tcaagtccgt cgagatgcac cacgagcagc ttggttaggg tgttcccggc gacaacgtcg 720
gcttcaacgt caagaacgtc tccgtcaagg agatccgtcg tggcaacgtt gccggtgact 780
ccaagaacga cccccctcg ggcccgcca cgttcaacgc ccaggtcatt gtccctgaacc 840
accccgcca ggctcggaac cgttcaacgc cggttctgga ctgccacacc gccacattg 900
cctgcaagtt caccgagatc cttgagaaga tcgaccgccc taccggcaag tcggttgaga 960
acaaccccaa gttcatcaag tcgggtgacg ccgccattgt caagctgacg ccctcgaagc 1020
ccatgtgcgt tgaggccttc actgactacc cccctctggg ccgtttcgcc 1070
```

<210> 454

<211> 1092

<212> DNA

<213> *Stephanoascus ciferrii* ATCC 52550

<400> 454

```
cttaagtctg agcgtgagag aggtatcacc atcgatattg ctctctggaa attcgagact 60
cctaagtaca acgttaccgt cattgatgct ccaggtcaca gagatttcat caagaacatg 120
attactggta cctcccaggc cgatcttgcc atccttatca ttgctggtgg tgtcgggtgag 180
ttcgaggctg gtatctccaa ggacggtcag accagagagc acgctcttct ttctttcacc 240
cttgggtgtc gaaacatgat tgttgcgtgc aacaagatgg actccgtcaa gtggtctgag 300
gatcgtttca acgaaattgt caaggagacc tccaacttcg tcaagaaggt tggttacaac 360
cctaagaata ttgctttcgt tcctatctcc ggttggaaacg gtgacaatat gattgagcca 420
tcaccaact gccatggta caagggttgg gagcgtgaga ccaagaacgg tactgccaag 480
ggtaagacca tcttgagggc cattgactct atggagccac cttccagacc agttgacaag 540
cctctccgtc ttctcttcca ggacgtttac aagattgggtg gtattggtac ggtgccagtt 600
ggtcgtgttg agactggtgt tatcaagcca ggtatggttg ttacctttgc ccagctggtg 660
gtcaccactg aagtcaagtc tgtcgagatg caccacgaac agatcccaga aggtacccca 720
ggtgacaacg ttggtttcaa cgtcaagaac gtctccgtca aggaaatcag acgtggtaac 780
gttactggtg actccaagaa cgacccacca aagggtcgcg actctttcaa cgctcaggtc 840
atcatcttca accaccctgg tcagatctct gctggttacg ctccagtttt ggactgccac 900
actgtcaca ttgcttgcaa gtttgaggag ctcatgaga agattgacag acgttccggt 960
aagaaggtcg aagactctcc taagttcgtc aaggccggtg atgccgccat tgtcaagatg 1020
gttccatcca agccaatgtg tgttgaaacc ttcactgagt acccacctct tggctgtttc 1080
gccgtccgtg ac 1092
```

<210> 455

<211> 1149

<212> DNA

<213> *Trichophyton mentagrophytes* strain WSA-225

<400> 455

```
gccgagcgtg agcgtgggtat caccatcgat atcgccctct ggaagttcga gacccccaaag 60
tacaatgtca ccgtcattgg tatgttttct ctttaccttt cccctccatc gtcttgctgt 120
gccataacta acgagagtag acgcccccggt tcaccgtgac ttcatcaaga acatgatcac 180
tggtagcttc caggccgact gtgctattct catcattgct gccggtactg gtgagttcga 240
ggctgggtat tccaaggatg gccagaccg tgagcacgct ctgctcgctt tcacccttgg 300
tgtcaagcag ctcatcggtt ccatcaacaa gatggacacc accaactggt ccgaggaccg 360
tttcaaggaa atcatcaagg aagtcaccaa cttcatcaag aagggtgggt acgaccccaa 420
gggtgtttcca ttggttccaa tctctggttt caacggtgac aacatgattg aggcctccac 480
caactgcccc tggtagaagg gatggaacaa ggagactaag gccggtgggt ccaagactgg 540
caagaccctc ctcgaggcca tcgatgccat cgacatgcca acccgctcta ccgacaagcc 600
cctccgtctc ccaactccagg atgtctacaa gatctctggt atcggaactg taccagtcgg 660
tcgtgttgag accggtatca tcaagcccg tatggctcgc accttcgccc ctgccaacgt 720
```

```

caccactgaa gtcaagtcg tcgaaatgca ccaccagcag cttcagcagg gtgtccccgg 780
tgacaacgct ggcttcaacg tcaagaacgt ttccgtcaag gaagtccgcc gtggtaacgt 840
tgccgggtgac tccaagaacg acccaccatc cggtgtgcc tccttcaacg cccagggtcat 900
cgctctcaac cccccgggcc agatcggtgc tggttacgcc ccagtcctcg actgccacac 960
tgctcacatt gcttgcaagt tcgctgagct cctcgagaag attgaccgcc gtaccggtaa 1020
atccgtcgaa gccaacccca agttcgtcaa gtctgggtgat gccgctatcg ccaagatggg 1080
tccctccaag cctatgtgcg ttgaggcttt cactgactac ccccccactg gtcgtttcgc 1140
cgtcctgta

```

<210> 456
 <211> 1101
 <212> DNA
 <213> *Trichosporon cutaneum* ATCC 62965

```

<400> 456
tcttgacaag cttaaagctg aacgtgaacg tggatcacc attgatatcg ctctctggaa 60
gttcgaaaact cctaagtact acgttactgt tattgatgct ccaggtcacc gtgatttcat 120
caagaacatg attactggta cttcccaagc cgactgcgcc attcttatca ttgctgccgg 180
tgtcggtgaa ttcgaagctg gtatctccaa ggaagggtcaa accagagaac acgctcttct 240
cgctttcacc cttgggtgtca gacaacttat cattgccatc aacaagatgg actctgtcaa 300
gtgggaccaa aagagatacg aagaaatcgt caaggaggct tccaacttcg tcaagaagg 360
tggttacaac cccaagtctg ttccattcgt tcctatctct ggttggaaac gtgacaacat 420
gttggaacct accaccaacg ccccatggta caagggatgg accaaggaaa ccaaggctgg 480
tgccactaag ggtatgactc ttattgaagc cattgacgcc attgaaccac cagtaagacc 540
atccgacaag ccactccgct tcccactcca agatgtttac aagattggtg gtatcggaac 600
tgtgccagtc ggccgtgtcg aaaccgggtat catcaaggcc ggtatggctg tcacctttgc 660
tccaccaatg gtcacaactg aagttaagtc cgttgaaatg caccacgaac aacttgctca 720
aggtaaccca ggtgacaacg ttggtttcaa cgtcaagaac gtttccgtta aggaaatcag 780
acgtggtaac gtctgtgggt actccaagaa cgatccacca aagggtctcg aatctttcaa 840
cgctcaagtt atcgctctga accacctgg tcaaactctc gctgggtact ctccagttct 900
cgattgccac actgcccaca ttgcctgcag attcgacgaa ctcttgaaa agatcgaccg 960
tcgttccggg aagaagattg aagactctcc aaagtttgct aagtctggtg atgccgctat 1020
cgtcaagatg atcccaacca agccaatgtg cgttgaaacc ttcactgaat acccaccact 1080
tggtcgtttc gccgtccgtg a
1101

```

<210> 457
 <211> 1085
 <212> DNA
 <213> *Wangiella dermatitidis* strain WSA-229

```

<400> 457
gttgaaggcc gagcgtgagc gtggtatcac catcgatata gccctctgga agttcgagac 60
ccccaaagta tatgtcaccg tcatcgacgc cccgggtcat cgtgacttta tcaagaacat 120
gatcactggg acctcgagg ccgactgcgc catcttgatc attgccgccg gtaccgggtga 180
attcgaagcc ggtatctcca aggatgggtc gacccgtgag cacgctctgc tcgcctacac 240
cttgggtgtc aagcagctca tcgtcgccat caacaagatg gacaccacca agtgggtccga 300
ggagcgtttc aacgaaatca tcaaggagac ttccaacttc atcaagaagg tcgggtacaa 360
ccccaaaggc gttcctttcg tccccatctc cggcttcaac ggtgacaaca tgattgaggt 420
ctccaccaac tgcccgtggg acaagggatg ggagaaggag tccaaggctg gcaaggccac 480
cggcaagacc ctccctcgagg ccattgacgc catcgacca cccaccgcgc ccaccgacaa 540
gcctctccgt ctccctctcc aggatgtcta caagatctct ggtatcgga cggttcctgt 600
cggctcgtgt gagaccggta ccatcaaggc cggtatggtc gtcaccttcg ctccggccaa 660
cgtcaccact gaagtcaagt ccgtcgaaat gcaccacgag cagctcgccg aggggtctgcc 720
aggtgacaac gttggcttca acgtcaagaa cgtctccgtc aaggagggtc gtcgtggtaa 780
cgttgccggg gactccaaga acgaccgcgc caagggtgcc gagtccttca acgcccagg 840
cattgtcctc aaccaccctg gtcagatcgg tgcgggtac gctccagtct tggattgcc 900
cactgcccac attgtttgca agttcgccga gtgtctcgag aagatcgacc gtcgtaccgg 960
aaagtcacat gagaacaacc ccaagttcat caagtctggt gatgctgcca tcgtcaagat 1020
gattcccagc aagcccatgt gtgtcgaggc tttcaccgac tatcctcctc tgggtcgttt 1080
cgctg
1085

```

<210> 458
 <211> 492

<212> DNA
<213> *Aspergillus fumigatus* strain DAL-95

<400> 458
tgtcttcacgc cggaattgat tgtgagtcgt tccacatgct cacctagttt tcgctcgatc 60
ttttcactaa cgcaaaccat gtagaacaac attgccaagg cccacggtgg ttactccgtc 120
ttcactgggtg ttggtgagcg tactcgtgag ggtaacgacg tgtaccacga aatgcaggag 180
actggtgtca ttcagctcga ggggtgaatcc aagggtcgac tgggtgttcg acagatgaac 240
gagccccccg gtgcccgtgc ccgtgtcgcc cttaccggtc tgaccattgc cgagtacttc 300
cgtgacgagg aggggtcagga cgtgtgtgctc ttcattgaca acattttccg ttccaccag 360
gccgggttctg aggtgtctgc ccttctcggt cgtatcccct ctgccgtcgg ttaccagccc 420
accctggccg tcgacatggg tggatgacg gagcgtatca ccaccacca gaagggttct 480
attacctccg tc 492

<210> 459
<211> 1154
<212> DNA
<213> *Blastoschizomyces capitatus* ATCC 10663

<400> 459
gtccgtgggc aagaagttat tgacactggg gccccaatta ccattcctgt tgggtcgtgg 60
actcttggtg gaattatcaa cgtcattggg gaaccaattg acgaacgtgg tcctatcaag 120
gcttctaagt atgctcctat ccatactgaa ccaccaacct ttgctgaaca atctacttct 180
gctgaagttc ttgaaactgg tatcaagggt gtcgatcttc ttgctcctta cgcccgtgg 240
ggtaagattg gtcttttcgg tgggtcgtgg gtcggtaaga ctgtcttcat tcaagaactt 300
attaacaaca ttgccaaggc tcacgggtgg ttctctgtct tctactgggt cggtgaaaga 360
accctgtaag gtaacgatct ttaccgtgaa atgaaggaaa ctgggtgtcat caacctcgaa 420
gggtgactcca aggtcgtctc cgttttcggg caaatgaacg aacctccagg tgcccgtg 480
cgtgtcgtct tgactgggtc taccattggc gaatacttcc gtgatgaaga aggacaagat 540
gtcttgcttt tcgttgacaa cattttcaga ttacccaag ccggttctga agtctctgct 600
cttttgggtc gtattccatc tgccgtcggg taccaacctc cccttgctac cgatatgggt 660
gccctccaag aacgtattac caccacccaa aagggttccg tcacatctgt ccaagccgtc 720
tatgtcccag cagacgattt gactgatect gcccagcca ccactttcgc tcaacttgac 780
gccaccactg tcttgtctcg ttccatttcc gaattgggtg tctaccacagc tgtcgatcct 840
ctcgattcca agtctcgtct tttggatcct gaagtattg gacacgaaca ctacgaagt 900
gccactcaag ttcaacaaac cctccaagct tacaagtctc tccaagatat cattgccatt 960
ttgggtatgg atgaattgtc tgaagctgat aagcttactg tcgaacgtgc ccgtaagatc 1020
caaagattcc tttcccaacc attcgtgtgt gccgaagttt tcaactgggt cgaaggctcg 1080
ctcgttccat tgaaggaaac cgtcagatct ttcaaggaaa tccttgaagg taagtacgat 1140
caccttccag aagc 1154

<210> 460
<211> 1295
<212> DNA
<213> *Candida albicans* ATCC 18804

<400> 460
ccaattcgac gaaggaaact tgccagctat tttgaatgct ttgactttga agaacgggtga 60
ccaagacttg gtcttggaag ttgctcaaca tttgggtgaa aacaccgtca gagctattgc 120
tatggatggg actgaagggt tagtcagagg taccgaagtc aacgataccg gtgccccaat 180
ctccgtccca gtcggtagag gtactttagg tagaatcatc aatgttggtg gtgaaccaat 240
tgatgacaga ggtccaattg aatgtaagga aaagaaacca attcacgctg aaccaccatc 300
attcgttgaa caatccactg ctgccgarat tttggaaacc ggtatcaagg ttgtcgactt 360
gttggcccca tacgccagag gtggtaarat tgggtttatc ggtgggtgctg gtgtcggtaa 420
gaccgtcttt atccaagaat tgattaacaa cattgccaaa gcccatgggtg gtttctctgt 480
ctttaccggg gtygggtgaaa gaaccagaga aggtaacgat ttgtaccgtg aaatgaaaga 540
aaccgggtgc atcaacttgg aagggtgactc caaggctcgt ttgggtcttcg gtcaaatgaa 600
cgaaccacca ggtgctagag cttagagttgc tttgactggg ttgaccattg ctgaatactt 660
cagagatgaa gaagggtcaag atgtcttggt gttcattgat aacattttca gattcaccca 720
agctggttcc gaagtgtctg ctttggttagg tctgattcca tctgctgtcg gttatcaacc 780
aaccttaggc actgatattg gtctttttgca agaacgtatt accaccacca agaaagggtc 840
cgtcacctct gtccaagctg tctatgtccc agctgatgat ttgaccgatc ctgctccagc 900
cactacattc gccatttgg atgccactac tgtcttgtct agagggtatt ctgaattggg 960
tatctaccca gctgtcgatc cattggattc caaatccaga ttattggacg cttctgttgt 1020

tgggtcaagaa	cattacgatg	tcgctactgg	tggttcaacaa	actttacaag	cttacaaatc	1080
cttacaagat	atcatttgcta	ttttgggtat	ggatgaattg	tctgaagctg	ataaattgac	1140
tgtcgaaaga	gcccgttaaga	tccaaagatt	cttgtctcaa	ccattcgctg	ttgctgaagt	1200
tttctactggt	atcccaggta	gattagtcag	attgcaagac	actgtcaaat	cattcaagga	1260
tgttttggaa	ggtaaatacg	ataacttgcc	agaaa			1295

<210> 461
 <211> 1277
 <212> DNA
 <213> Candida dubliniensis strain NCPF 3949

<400> 461						
taacttgcca	gctatTTTTga	atgctttgac	tttgaagaac	ggtgaccaag	atttagtttt	60
ggaagttgct	caacattttg	gtgaaaacac	cgtcagagct	attgctatgg	atgggtactga	120
aggtttagtc	agagggtactg	aagtcaacga	taccggtgcc	ccaatctccg	ttccagtcgg	180
tagaggtagc	ttagggtagaa	tcatcaatgt	tggttggtgaa	ccaattgatg	acagagggtcc	240
aattgaatgt	aaggaaaaga	aaccaattca	tgcagaacca	ccatccttcg	ttgagcaatc	300
cactgctgcc	gaaatTTTTg	aaaccggtat	caagggtgtc	gacttattgg	ccccatacgc	360
cagagggtgt	aagattggtt	tggtcgggtg	tgctgggtgc	ggtaagaccg	tctttatcca	420
agaattgatt	aacaacattg	ctaaagccca	tggtgggttc	tccgtcttta	ccggtgtcgg	480
tgaaagaacc	agagaaggta	acgattttgt	ccgtgaaatg	aaagaaaccg	gtgtcatcaa	540
cttagaagg	gactccaagg	tcgcttttgt	ctttggacaa	atgaacgaac	caccagggtgc	600
tagagctaga	gttgctttga	ctgggttgac	tattgctgaa	tacttcagag	atgaagaagg	660
tcaagatgtc	ttgttggtca	tcgataacat	tttcagattc	acccaagctg	gttccgaagt	720
gtctgctttg	ttagggtcgta	ttccatctgc	cgctcggttat	caaccaacct	tagctactga	780
tatgggtctt	ttgcaagaac	gtattaccac	caccaagaaa	ggttccgtca	cctctgtcca	840
agctgtctat	gtcccagctg	atgattttgac	cgatcctgct	ccagccacca	cattcgccca	900
tttggtatgcc	actactgtct	tgtctagagg	tatttctgaa	ttgggtattt	accagctgtg	960
cgatccattg	gattccaaat	ccagattatt	ggacgctgcc	gttggttggtc	aagaacatta	1020
tgatgtcgct	actggtgttc	aacaaacttt	gcaagcttac	aaatccttac	aagatatcat	1080
tgctattttg	ggtatggatg	aattgtctga	agctgataaa	ttgactgtcg	aaagagcccg	1140
taagattcaa	agattcttgt	ctcaaccatt	cgccggtgct	gaagttttca	ctgggtattcc	1200
aggtagatta	gtcagattgc	aagacactgt	caaatcattc	aaggatgttt	tggaaggtaa	1260
atacgatcac	ttgccag					1277

<210> 462
 <211> 1278
 <212> DNA
 <213> Candida famata ATCC 62894

<400> 462						
gtaacttgcc	agctatTTTTg	aacgctttga	ccttgaagaa	cggtgaaaac	gacttagttt	60
tagaagttgc	ccaacatttg	gggtgaaaaca	ccgtcagagc	tattgctatg	gatgggtactg	120
aaggtttagt	tagagggtact	ccagttaccg	attctgggtgc	tccaatttct	gtcccagtcg	180
gtagaggtag	tttaggtaga	atccttgaacg	ttattgggtga	accaattgat	gaacaagggtc	240
cagttgatgc	caaggaaaacc	agaccaattc	accaagacc	accagcattc	gttgatcaat	300
ccaccaaggc	tgaagttttg	gaaactggta	tcaagggtgt	cgatttatta	gccccttacg	360
ctagagggtg	taagattggg	ttattcgggtg	gtgccgggtg	cggtgaagacc	gtctttatcc	420
aagaattgat	taacaacatt	gccaaaggccc	atgggtggtt	ctctgttttc	actgggtgtcg	480
gtgaaagaac	cagagaagg	aacgattttat	atagagaaat	gaaggaaaact	ggtgtcatta	540
acttggaagg	tgactccaag	gtcgccttgg	ttttcgggtca	aatgaacgaa	ccaccagggtg	600
ctagagctag	agttgcttta	accggttttaa	ccattggccga	atacttcaga	gacgaagaag	660
gtcaagatgt	gttattgttc	gtcgataaca	tttttagatt	cacccaagcc	ggttccgaag	720
tgtctgcttt	gttaggtcgt	attccatcgg	ctgtcgggtta	tcaaccaacc	ttagccactg	780
atatgggtct	tttacaagaa	agaattacca	ccaccaccaa	gggttccggt	acttctgtcc	840
aagctgtcta	cgccccagcc	gatgatttaa	ccgatcctgc	tccagctacc	actttcgccc	900
acttggtatg	taccactgtg	ttgtctcgtg	gtatctctga	attgggtatt	taccagctg	960
tcgatccatt	ggattccaaa	tccagattgt	tagatgctga	tatcggtggg	aaagaacact	1020
acgaagttgc	cactgggtgtc	caacaaacct	tacaagctta	caaattcttta	caagatatca	1080
ttgctatttt	aggatggat	gaattgtctg	aagccgataa	attgactgtc	gaaagagcca	1140
gaaagatcca	aagattcttg	tctcaacccat	tcgccgttgc	cgaagttttc	accggtatcc	1200
caggtagatt	agtttagattg	caagacactg	ttaaatcttt	caagggaagtc	ttagaaggta	1260
aatatgatca	cttaccag					1278

<210> 463
<211> 1154
<212> DNA
<213> *Candida glabrata* ATCC 66032

<400> 463
tctggtcaga ggcgagaagg tcgtcgacac aggtgcccga atctccgtcc ctgtcggcag 60
agagaccctg ggcagaatca tcaacgttat cgggtgaacct atcgacgagc gtggcccacat 120
caactcaaag ttgagaaagc ctatccacgc cgacctcctt tcttctgcag aacagtccac 180
cgccgccgaa gtcctggaaa caggtatcaa ggctcgcgac ttgctggccc cttacgccag 240
aggtggtaag atcgggtctgt tcgggtgggtg cgggtgctcgg aagaccgtgt tcatccaaga 300
actgatcaac aacatcgcaa aggtcacggg tgggtttctcc gtgttcacag gtgtcgggtga 360
aagaaccaga gaaggtaacg atttgtacag agaaatgaag gaaaccggtg tcatcaactt 420
ggaaggtgac tctaagggtcg ccttgggtctt cggccaaatg aacgaaccac caggagccag 480
agccagagtc gccttgaccg gtttgaccat cgcagaatac ttcagagatg aagaagggtca 540
agatgtcctg ctgttcgtcg acaacatttt cagattcacc caagccggtt cagaagtctc 600
cgctttgtcta ggtcgatatc catccgccgt cgggttatcaa ccaaccttgg ccaccgatat 660
gggtctgttg caagaaagaa ttaccaccac aaagaagggt tccgtcactt ccgtccaagc 720
cgtctacgtg cctgcagatg atttaacaga tcttgcctt gccactactt tcgctgactt 780
ggacgccacc accgtcttgt ccagaagtat ctgagaattg ggtatctacc cagctgtcga 840
cccattggac tccaagtcta gattgctaga cgtgcggtt gtcgggtgaag agcattacaa 900
cgtcgccaca aaggtccaag aaactttaca aacttacaag tctctgcaag atatcatcgc 960
cattttgggt atggatgaat tgtccgaaca agataagcta actgtcgaaa gagcaagaaa 1020
gatccaaaga ttcttgtccc aaccattcgc tgtcgctgaa gttttcaccg gtatcgaagg 1080
taagctggtc agattgaagg acaccatctc ctctttcaag gctgtcttgg aaggtaagta 1140
cgatgatctt ccag 1154

<210> 464
<211> 1293
<212> DNA
<213> *Candida guilliermondii* ATCC 6260

<400> 464
ccactacgag gacggtaacc ttcctgctat tttcaacgcc ttgactctta agaacggtga 60
ccaaaacttg gttttggaag ttgcccagca tttgggtgaa aacaccgtca gaaccattgc 120
tatggatggg actgaagggt tgggttagagg tgccagcgtc actgacactg gtgctcctat 180
ctctgtgcct gttgggtcgtg gtactttggg tcgtatcatc aacgttattg gtgagccaat 240
tgacgagcgt ggaccaatcg agtccaagca aaagaagccc attcacgctg aaccaccatc 300
gttcgtcgaa caatccactt ctgccgaggt tttggaaacc ggtatcaagg ttgtcgactt 360
gattggctcca tacgccagag gtggtaagat tggattgttc ggtgggtgccg gtgtcggtaa 420
gactgtgttt atccaagagt tgattaacaa cattgccaaag gctcacggtg gtttctccgt 480
gttcaccggt gtcggtgaaa gaaccagaga aggtaacgat ttgtaccgtg aaatgaagga 540
aactgggtgc atcaacttgg aaggtgaatc caaggtggcc ttgggtgttcg gtcaaatagaa 600
cgaacctcca ggagctagag ccagagttgc ccttaccggt ttgaccatcg ctgaataactt 660
cagagatgag gagggtcaag atgtgttgtt gttcgtcgac aacattttca gattcactca 720
agctgggtct gaagtgtcgg ctttgttggg tcgtattcct tcggctgtcg gttaccaacc 780
tactttggcc accgatattg gtttgttgca agagcgtatt accaccacca agaagggttc 840
cgtcacctct gtccaagctg tctatgtgcc agccgatgat ttgaccgatc ctgctcctgc 900
tactactttt gtcacttgg atgctaccac tgtgttgtct agaggtatct ccgagttggg 960
tatttaccce gctgtcgatc ctttggattc caagtcgaga ttgttggtatg cctctgttgt 1020
cgggtgaggag cactactcgg ttgcttctaa cgttcaacaa accttgcaag cttacaagtc 1080
tttgcaagat atcattgcca ttttgggtat ggacgaattg tcggaagctg acaagttgac 1140
cgtcgagaga gcccgtgaag tcgagagatt cttgtctcaa ccatttgcgt ttgccgaagt 1200
tttcaactgg atcagtggtg agttgggtcag attggaggac actatcagat ctttcaagga 1260
agtcttgga ggtaagtacg atcacttgcc aga 1293

<210> 465
<211> 1293
<212> DNA
<213> *Candida haemulonii* ATCC 22991

<400> 465
cactttgacg atggtaactt gccagccatt ttcaacgcct tgaagttgaa gaacggtgac 60
caggacttgg tcttggaggt cgcccagcac ttgggtgaga acaccgtcag aaccattgcc 120

atggacggta	ccgatgggtt	ggtcagaggg	gaggctgtca	ctgacactgg	tgtccaatc	180
tccgtgcctg	ttgggtcgtg	gactttgggt	cgtatcatca	acgttattgg	tgagccaatt	240
gacgagagag	gaccaatcaa	gtccaagaag	agaaacccaa	tccacactga	cccaccaacc	300
ttcgttgagc	agtctacttc	tgtcgagggt	ttggagactg	gtattaaggt	tgtcgacttg	360
ttggccccct	acgccagagg	tggttaagatt	ggtttggtcg	gtgggtgccg	tgtaggtaag	420
accgtcttta	tccaagagtt	gattaacaac	attgccaaag	cccacgggtg	tttctctgtc	480
tttaccgggtg	tccgtgagag	aaccagagaa	ggtaacgatt	tgtaccgtga	aatgcaggag	540
accgggtgtca	tcaacttcga	gggtgactcc	aaggtcgcct	tggtcttcgg	tcagatgaac	600
gagccaccag	gagctagagc	tagagttgct	ttgaccgggt	tgaccattgc	cgaatacttc	660
agagatgaag	aaggtcagga	tgtgttggtt	ttcgttgaca	acattttcag	attcactcag	720
gctgggtccg	aggtgtccgc	cttggtgggt	cgtattccat	ctgctgtcgg	ttaccagcca	780
accttggcca	ccgatatggg	taccttgcaa	gaaagaatta	ccaccacca	gaagggttcc	840
gtcacctctg	tccaggccgt	ttacgtgcca	gctgatgatt	tgaccgatcc	tgccccagct	900
accactttcg	ctcacttgga	tgctaccact	gtgttggtct	gagggtatttc	cgagtgggtg	960
atctaccag	ctgtcgaccc	attggactcc	aagcttagat	tggtggatgc	ctctgttggt	1020
ggtaaggagc	actacgatgt	tgctaccaac	gtccagcaga	ccttgagggc	ctacaagtcc	1080
ttgcaggata	tcattgccat	tttgggtatg	gatgaattgt	ccgaagccga	caagttgact	1140
gtcgagagag	ctagaaagat	tcagagattc	ttgtcccagc	cattcgccgt	cgccgaggtt	1200
ttcactggta	tcgagggtaa	gttggtcaga	ttggaggaga	ccgtcaagtc	tttcaaggag	1260
gtcttggtatg	gtaagtacga	ccacttgcca	gag			1293

<210> 466

<211> 1111

<212> DNA

<213> Candida inconspicua ATCC 16783

<400> 466

aacgggtggat	ctaagttagt	cttagaagtt	gctcaacatt	tgggtgaaaa	caactgtcaga	60
accattgcta	tggtatggta	tgaaggttta	gttagagggtc	aaccagttaa	tgatactgggt	120
gctccaatct	ctgtcccagt	cggttagagggt	actttagggt	gaatcttaaa	cgttattgggt	180
gatccagtcg	atgaaagagg	tccaattgat	tgtaaggaaa	gaaaaccaat	tcatacaagat	240
cctcctgctt	tcgttgaaca	atctactgaa	gctgaagttt	tagaaaccgg	tattaaggtt	300
gttgatttat	tagctcctta	cgctagagggt	ggtaagattg	gtttattcgg	tggtgctgggt	360
gtcggtaaaa	cgtttttcat	tcaagaatta	attaacaatg	ttgcaaaggc	tcattggtgggt	420
ttctcagttt	tactggtgtg	cggtgaaaga	accagagaag	gtaatgattt	atacagagaa	480
atgaaggaaa	ctggtgttat	taacttagaa	gggtgaatcta	aggtcgcctt	agttttcgggt	540
caaataaatg	aaccaccagg	agcaagagca	agagttgctt	taaccgggtt	aactattgct	600
gaatacttca	gagatgaaga	aggccaagat	gtctgtttat	tcattgataa	catttttcaga	660
tttactcaag	caggttctga	agtttctgca	ttgttaggta	gaattccatc	cgctgtcgggt	720
tatcaacca	cttttagcaac	tgatatgggt	cttttacaag	aaagaattac	aactactaag	780
aaagggttccg	ttactttctgt	ccaagcagtt	tatgtcccag	cagatgattt	aactgatcct	840
gctccagcaa	ctactttcgc	ccacttagat	gcaactactg	tcttatctag	aggtatttcc	900
gaattaggta	tttaccagc	tgctgatcca	ttgatattcta	aatctagatt	attagatggt	960
gctgttggtg	gtcaagaaca	ttatgatggt	gcaactcaag	ttcaagaaac	tttacaagca	1020
tacaaatctt	tacaagatat	tattgctatt	ttaggtatgg	atgaattatc	tgaacaagat	1080
aaattaaccg	ttgaaagagc	aagaaagatt	c			1111

<210> 467

<211> 1283

<212> DNA

<213> Candida kefyr ATCC 28838

<400> 467

tcgaacaagg	tcaattgcca	gaaatthttga	acgctthttgga	gattgawact	cctcaaggta	60
agttgggttt	ggaagttgcc	caacatthttg	gtgaaaaacac	cgtcagaacc	attgctatgg	120
acgggtaccga	aggttttggtc	cgtgggtgaga	aggtthtttga	cactgggtgct	ccaatttccg	180
tcccagtcgg	tagagaaact	ttgggttagaa	tcatacaacgt	tattgggtgag	ccaattgacg	240
aaagaggccc	aatcaagtcc	aagatgagaa	agccaattca	cgctgaccct	ccatcctttg	300
ttgaacaatc	cactgctgct	gaagthtttgg	aaaccgggtat	caagggtgtc	gacttggttg	360
ccccatacgc	cagaggtgggt	aagattgggt	tgttcgggtgg	tgccgggtgtc	ggtaagaccg	420
ttttcatcca	agagttgatt	aacaacattg	ccaaggccca	tggtgggtttc	tccgtcttca	480
ccgggtgtcgg	tgaaagaacc	agagaaggta	acgattthtga	ccgtgaaatg	aaggaaaccg	540
gtgtcatcaa	cttggaagggt	gactccaagg	tgcctthtgg	cttcgggtcaa	atgaacgaac	600
cacctggagc	tagagccaga	gttgctcttga	ccggthttgac	tatcgctgaa	tacttcagag	660

atgaagaagg	tcaagatgtg	ttgtttgttta	tgcacaacat	tttcagattc	acacaagccg	720
gttccgaagt	gtccgctttg	ttgggtcgta	ttccatccgc	tgtcggttac	caacctactt	780
tggccaccga	tatgggtttg	ttgcaagaaa	gaattaccac	taccaagaag	ggttccgtta	840
cctccgtcca	agctgtctac	gtccctgctg	atgatttgac	tgatcctgct	ccagctacya	900
ctttcgccca	tttgacgccc	accaccgtgt	tgtccagagg	tatctccgaa	ttgggtatct	960
accagctgtg	cgatccattg	gattccaagt	ctagattgtt	ggacgctgcc	gttgctcggtc	1020
aagaacatta	cgacgtcgct	actcaagttc	aacaaaacttt	gcaagcttac	aagtctttgc	1080
aagatatcat	tgccattttg	ggtatggatg	aattgtctga	acaagacaag	ttgactgtcg	1140
aaagagccag	aaagatccaa	agattcttgt	ctcaaccatt	cgccgtcgcc	gaagttttca	1200
ctggtatccc	aggtagattg	gtcagattaa	aggacaccat	cgcttccttc	aaggctgttt	1260
tggaaggtaa	gtacgatcac	ttg				1283

<210> 468
 <211> 1287
 <212> DNA
 <213> Candida krusei ATCC 34135

<400> 468						
cttcgaacaa	ggccaattac	cacaaatttt	aaacgcttta	gttatggata	atgggtggtaa	60
caagttagtt	ttagaagttg	ctcaacattt	aggtgaaaac	actgtcagaa	ccattgctat	120
ggatgggtact	gaaggttttag	ttagagggtca	aaccgttaac	gataccgggtg	ctccaatctc	180
tgtcccagtt	ggtagaggta	ccttaggttag	aatcttgaac	gtcattgggtg	atccagtcga	240
tgaaagaggt	ccagttgact	gtaaggaaaag	aaagccaatt	cacgctgatc	ctccagctttt	300
cgttgaacaa	tccactgaag	ctgaagtttt	ggaaactggg	attaagggttg	tcgattttatt	360
agcaccttac	gcaagagggtg	gtaagattgg	tttattcggg	ggtgctgggtg	ttggtaaagac	420
cgttttttatc	caagaattga	tcaacaatgt	ygcaaaggct	catgggtggtt	tctccgtttt	480
cactgggtgtt	ggtgaaagaa	ccagagaagg	taacgattta	tacagagaaa	tgaaggaaaac	540
tggtgtttatt	aacttggaag	gtgaatccaa	ggtcgcctta	gttttcgggtc	aaatgaacga	600
accaccagga	gctagagcaa	gagttgtctt	aactggtttg	accattgcag	aatatattcag	660
agatgaagaa	ggtcaagatg	tcttggttatt	cattgataac	attttcagat	tcaccaagc	720
aggttctgaa	gtctctgcat	tattaggttag	aattccatct	gctgtcgggtt	atcaaccaac	780
tttagcaacc	gatatgggtc	ttttacaaga	aagaattacc	accaccaaga	agggttccgt	840
tacttctgtc	caagctgttt	atgtcccagc	cgatgattta	accgatcctg	ctccagctac	900
tactttcgcc	cacttggatg	caaccactgt	cttgctcyaga	ggtattttccg	aattaggtat	960
ctaccagctg	gtcgatccat	tagattctaa	gtctagatta	ttagatgttg	cagttgttgg	1020
tcaagaacat	tatgaagttg	caactcaagt	ccaagaaact	ttacaagctt	acaagtcttt	1080
acaagatat	attgctattt	tgggtatgga	tgaattatct	gaacaagata	agttaacygt	1140
tgaagagca	agaaagatcc	aaagattctt	atctcaacca	ttctctgttg	cagaagtttt	1200
cactgggtatt	ccaggtaagt	tagtcagatt	agaagaaacc	atcaagtctt	tcagggatgt	1260
tcttgcagggt	aagtacgatc	acttacc				1287

<210> 469
 <211> 1283
 <212> DNA
 <213> Candida lambica ATCC 24750

<400> 469						
tcgaacaagg	tcaattacca	ccaattctta	acgcttttgg	catggaaaac	gatgggtcaaa	60
agttagtttt	ggaagttgct	caacattttg	gtgaaaacac	cgtcagaacc	attgctatgg	120
acggtaccga	aggttttagtt	agaggtcaac	ctgttaacga	cactgggtgct	ccaatctctg	180
tcccagttgg	tagaggtagt	cttggttagaa	tcttgaacgt	cactgggtgac	ccagtygatg	240
aaagaggtcc	tgtcgamtgt	aaggagagaa	gaccaattca	ccaagaccca	cctgctttcg	300
ttgaccaatc	cactgaagct	gaagtttttg	aaaccgggtat	taagggtgtc	gattttattag	360
caccttacgc	tagagggtgt	aagattgggt	tgttcgggtg	tgctgggtgtc	ggtaagaccg	420
ttttcatcca	agaattgatt	aacaatgttg	ctaaggccca	cggtgggtttc	tccgtttttca	480
ctggtgtcgg	tgaagaaacc	agagaaggta	acgatttata	cagagaaatg	aaggaaaaccg	540
gtgttattaa	ccttgaagggt	gaatctaagg	tcgcctcggt	tttcgggtcaa	atgaacgaac	600
caccaggagc	aagagctaga	gttgctctta	ctgggtttgac	cattgctgaa	tacttcagag	660
atgaagaagg	tcaagatgtc	ttgtcttttca	ttgacaacat	tttcagattc	acccaagcag	720
gttccgaagt	gtctgctttg	ttaggttagaa	ttccwtctgc	cgttgggttac	caaccaacct	780
tagcaaccga	tatgggtttg	ttacaagaaa	gaattaccac	caccaagaag	ggttccgtca	840
cctccgtcca	agctgtttac	gtcccagctg	atgattttrac	tgaccctgca	ccagcaacca	900
ctttcgccca	cttggatgct	accaccgtct	tgtctagagg	tatttccgaa	ttaggtattt	960
accagctgtg	cgatccatta	gattctaagt	ctagattatt	ggatgtcgct	gttgctcggtc	1020

aagaacatta	taccggttgca	acycaagtc	aagaaacttt	acaagcttac	aagtccttac	1080
aagatcatcat	tgctatctt	ggatgggacg	aattatctga	acaagataag	cttactgttg	1140
aaagagcaag	aaagatccaa	agattccttt	cccaaccttt	ctccgtcgca	gaagttttca	1200
ctggtatccc	aggtaagctt	gtcagattag	aagaaacat	tatttccttc	agagatgtcc	1260
tcgatggtaa	gtacgaccac	tta				1283

<210> 470

<211> 1140

<212> DNA

<213> *Candida lusitaniae* ATCC 66035

<400> 470

aggtgcctct	gtcactgaca	ctggttctcc	aatctctgtc	cctggtgggc	gtgaaacctt	60
gggtagaatt	atcaacggtg	ttggtgagcc	aattgacgag	agaggcccaa	tcaactccaa	120
gaagagaaac	ccaattcaca	ctgagccacc	atcggttgtt	gaacaatcca	cttctgctga	180
agttttggag	actgggtatca	agggtgtcga	cttgttggcc	ccttacgcca	gaggtggtaa	240
gattgggttg	ttcgggtgtg	ccgggtgtcg	taagaccgtt	ttcatccaag	agttgattaa	300
caacattgcc	aaggcccacg	gtggtttctc	tgttttcact	gggtgtcggtg	aaagaaccag	360
agaaggtaac	gattttgtacc	gtgaaatgca	agagaccggt	gtcatcaact	tcgaggggtga	420
ctccaagggtc	gccttgggtct	tcgggtcaaat	gaacgaacca	ccaggagcca	gagctagagt	480
tgctttgacc	ggtttgacta	ttgccgagta	cttcagagac	gaagagggcc	aagatgtctt	540
gttgttcggt	gacaacattt	tcagattcac	ccaggccggt	tctgaagtgt	ctgctttgtt	600
gggtcgtatt	ccatccgctg	tcggttacca	accaaccttg	gccaccgata	tggtgtcttt	660
gcaagagaga	attaccacca	ccaagaaggg	ttccgtcacc	tctgtccaag	ccgtttatgt	720
tccagctgat	gacttgactg	accctgtctc	agccaccacc	ttcgccact	tggacgccac	780
cactgtgttg	tccagaggta	tctctgaatt	gggtatctac	ccagctgtcg	acccattgga	840
ctccaagtct	agattgttgg	acgcttctat	tggttgtaag	gagcactacg	aagttgtctc	900
taacgttcaa	caaactttgc	aagcttacaa	gtctttgcaa	gatatcattg	ccattttggg	960
tatggatgaa	ttgtctgagg	ctgacaagtt	gaccgttgag	agagccagaa	agatccaaag	1020
attcttgtct	caaccattcg	ctgttgccga	ggttttcact	ggatatccag	gtagattggt	1080
cagattggag	gacactgtca	gatacttcaa	ggaagttttg	gacggtaagt	acgaccactt	1140

<210> 471

<211> 1296

<212> DNA

<213> *Candida norvegensis* ATCC 22977

<400> 471

tcaattcgaa	caagggtcaat	taccaccaat	tttaaacgct	ttagtcatgg	acaacgggtg	60
aactaagtta	gttttagaag	ttgctcaaca	tttaggtgaa	aacaccgtca	gaaccattgc	120
tatggatggg	actgaagggt	tagtttagag	tcaaccagtt	aatgatactg	gtgctccaat	180
ctctgtccca	gtcggtagag	gtacttttag	tagaatctta	aacgttattg	gtgatccagt	240
cgatgaaaga	ggtccaatcg	attgtaagga	aagaaaacca	attcatcaag	atcctcctgc	300
tttcggtgaa	caatcaactg	aagctgaagt	tttagaaact	ggtattaaag	ttgtcgattt	360
attagctcct	tacgctagag	gtggtgaagt	tggtttattc	gggtggtgag	gtgttggtaa	420
aaccgttttt	attcaagaat	taattaacaa	tggtgcaaaa	gctcatgggt	gtttctccgt	480
tttactgggt	gtcggtgaaa	gaactagaga	aggtaacgat	ttatacagag	aaatgaagga	540
aactgggtgt	attaatttag	aagggtgattc	taagggtcgca	ttagttttcg	gtcaaatgaa	600
cgaaccacct	ggagcaagag	caagagttgc	tttaactggg	ttactatttg	ctgaatattt	660
cagagatgaa	gaagggtcaag	atgtcttggt	attcattgat	aacattttca	gatttactca	720
agcagggtct	gaagttttccg	ctttgttagg	tagaattcca	tccgctgtcg	gttatcaacc	780
aacttttagca	actgatattg	gtcttttaca	agaaagaatt	actactacta	agaaagggtc	840
tggtacttcc	gttcaagcag	tttatgtccc	agcagatgat	ttactgatc	ctgctccagc	900
aactactttc	gccacttag	atgcaactac	tgtcttatct	agagggtattt	ccgaattagg	960
tatttaccga	gctgtcgatc	cattagattc	ttaatctaga	ttattagatg	ttgcagttgt	1020
tggtcaagaa	cattatgatg	ttgcaactca	agttcaagaa	actttacaag	cttacaatc	1080
tttacaagat	attattgcta	ttttaggat	ggatgaatta	tctgaacaag	ataaattaac	1140
cggtgaaaga	gctagaaaaa	ttcaaagatt	cttatctcaa	cctttctctg	tcgcagaagt	1200
tttactgggt	atcccaggta	agcttggttag	attagaagaa	actattttctt	cattcagaga	1260
tgtcttagca	ggtaagtacg	atcacttacc	agaaaa			1296

<210> 472

<211> 1297

<212> DNA

<213> *Candida parapsilosis* ATCC 90018

<400> 472

acacttcgaa	gaaggaaact	tgccagctat	tttgaacgct	ttgaccttga	aaaacggtaa	60
acaagacttg	gtcttggaag	ttgcccaca	tttgggtgaa	aacaccgtca	gagcaattgc	120
tatggatggg	actgaagggt	tagtttagagg	tacttctgtc	actgacactg	gtgcccacat	180
ttctgtccca	gttggttagag	gtactttggg	tagaatcatc	aatgttactg	gtgaccacat	240
tgatgaaaga	gggtccaattg	aatgtaagaa	gagaaaccca	atccacgctg	aaccaccttc	300
attcattgaa	caatccactg	ctgctgaagt	tttggaacc	ggtattaagg	ttgtcgactt	360
gttggctcca	tacgctagag	gtggtaagat	tgggttggtc	ggtggtgccg	gtgtcggtaa	420
aaccgtgttt	atccaagaat	tgatcaacaa	cattgccaag	gcacatgggt	gtttctcggt	480
tttcaactgg	gttggtgaaa	gaaccagaga	aggtaacgat	ttgtaccgtg	aaatgaagga	540
aactggtgtt	atcaacttgg	aagggtgactc	caaggctcgt	ttggttttcg	gtcaaataaa	600
cgaaccacct	ggagctagag	ctagagttgc	tttgactggg	ttgaccattg	ctgaataact	660
tagagatgaa	gaagggtcaag	atgtcttgtt	gtttattgac	aacattttca	gattcaccca	720
agctggttca	gaagtgtctg	ctttgttggg	tcgtattcca	tccgctgtcg	gttatcaacc	780
aaccttggcc	accgatattg	gtcttttgca	agaacgtatt	accactacca	aaaagggttc	840
agttacttca	gtccaagccg	tttacgtgcc	agctgatgat	ttaaccgatc	ctgctccagc	900
taccactttc	gtcactttgg	atgccaccac	tgtgttgtct	agagggtatt	cggagttggg	960
tatttaccca	gctgtcgatc	cattggattc	caaattccaga	ttgttggatg	ctgccgttgt	1020
tgggtcaagaa	cattacgacg	ttgccactgg	tgttcaacaa	actttacaag	cttacaagtc	1080
cttgcaagat	atcattgcta	tcttgggtat	ggatgaattg	tccgaacaag	ataaattgac	1140
tgctgaaaga	gctcgtgaag	ttcaaagatt	cttgtctcaa	ccatttgcgt	tcgctgaagt	1200
tttcaactgg	attccaggta	aattggttag	attgtctgaa	actgtcaagt	cattcaagga	1260
agtcttggaa	ggttaagtacg	ataacttgcc	agaaaaat			1297

<210> 473

<211> 1285

<212> DNA

<213> *Candida rugosa* ATCC 96275

<400> 473

ccagtttggc	aacgacctcc	ctgccatttt	gaacgccttc	actcttcagc	gtgaagacgg	60
taacaagctt	gttcttgagg	ttgcccagca	tctcggtgag	aacaccgtcc	gtaccattgc	120
tatggacggg	accgagggtt	tggtgctggg	cactggtgtc	cacgacaccg	gacaccccat	180
catgactccc	gtcggtgacg	gtaccctggg	acgtattctt	aacgtcaccg	gtgacctgt	240
agacgagcgt	gggtcccgtca	agactgacaa	gttccgcccc	atccacgccc	aggcccctgc	300
cttcgatgag	caggctacca	gtgccgaggt	tcttgagacc	ggtatcaagg	ttgtcgactt	360
gctcgtctct	tacgccaagg	gtggtaagat	tgggttggtc	ggtggtgccg	gtgtcggtaa	420
gaccgtcttc	atccaggagc	tgattaacaa	catcgccaag	gcccacgggt	gttactccgt	480
gttcaactgg	gtcggtgagc	gtactcgtga	gggtaacgat	ttgtacaagg	aaatgatcga	540
gtccggtgtc	atcaacctcg	atggtgagtc	caaggctgcc	ttggtgttcg	gtcagatgaa	600
cgagccccct	ggagcccgtg	cccgtgtcgc	ccttaccggt	cttaccatcg	ctgagtattt	660
ccgtgatgag	gagggttaagg	atgtcttgtt	gttcggtgac	aacattttcc	gcttcaactca	720
ggccggttct	gaggtgtccg	ccttgcttgg	tcgtattcct	tccgctgtcg	gttaccagcc	780
taccctggcc	accgatattg	gtgcccttca	ggagcgtatc	accaccacca	agaagggttc	840
cgttacatcc	gtccaggccg	tctacgtccc	tgccgatgat	ttgactgac	ccgcccctgc	900
caccaccttc	gcccatttgg	atgccaccac	tgtcttgtct	cgtgccatct	ctgagttggg	960
tatctacccc	gctgtcgacc	ctctcgactc	caagtcccgt	cttcttgacg	ccgtgtcgt	1020
tggtcaggag	cactacgata	ctgccacctc	cgttcagcag	actttgcagg	cttacaagtc	1080
tttgaggat	atcattgcca	ttcttgggat	ggatgagttg	tccgagtcgt	acaagctcac	1140
cgtcgagcgt	gctcgtgaag	tccagcgttt	cctctcccag	cctttcgtcg	ttgctgaggt	1200
cttcaactgg	attcagggcc	gtcttgttcc	tctcaaggac	actgtccgct	ccttcaagga	1260
gattctcgaa	ggttaagtacg	atgct				1285

<210> 474

<211> 1283

<212> DNA

<213> *Candida sphaerica* ATCC 2504

<400> 474

ttgaacaagg	tcaattgcca	gctattttga	acgcttttga	aatcgacact	ccagaaggaa	60
agttgggttt	ggaagtcgct	caacatttgg	gtgaaaacac	tgtcagaacc	attgctatgg	120

atggtactga	aggtttagtc	cgtggtgaaa	acgtttctga	cactggtgct	ccaatttccg	180
ttccagttgg	tagagaaacc	ttgggtagaa	ttatcaacgt	tattggtgag	ccaattgacg	240
aaagaggtcc	aatcaactcc	aagatgagaa	agccaattca	tgctgatcct	ccattattcg	300
ttgaacaatc	cactgctgct	gaagtttttg	aaactggtat	caagggtgtc	gacttggttg	360
ccccatacgc	cagaggtggt	aagattgggt	tggtcgggtg	tgccggtgtc	ggtaagaccg	420
ttttcatcca	agaattgatt	aacaacattg	ccaaggctca	tggtgggttc	tctgtcttca	480
ctggtgtcgg	tgaagaacc	agagaaggta	acgatttgta	ccgtgaaatg	aaggaaactg	540
gtgttatcaa	cttggaagg	gattctaagg	tgcggttggt	tttcggtcaa	atgaacgaac	600
ctcctggagc	tagagctaga	gtcgccttga	ctgggttgac	catcgctgaa	tacttcagag	660
atgaagaagg	tcaagatgtc	ttgttggtta	tgcacaacat	tttcagattc	acacaagccg	720
gttccgaagt	gtccgctttg	ttgggtcgta	ttccatccgc	tgctcggttat	caaccaactt	780
tggtccaccga	tatgggtttg	ttgcaagaaa	gaattactac	caccaagaag	ggttccgtca	840
cttctgtcca	agccgctttac	gtgccagctg	atgatttgac	tgatcctgct	ccagctacca	900
ctttcgcgca	tttggtatgcc	accactgtgt	tgtccagagg	tatctctgaa	ttgggtatct	960
accagctgtg	cgatcctttg	gattccaaat	ctagattggt	ggatgctgct	gtcgttggtc	1020
aagaacatta	cgatgtcgct	actcaagttc	aacaaacttt	gcaagcttac	aagtctttgc	1080
aagatatcat	tgccattttg	ggtatggatg	aattgtccga	acaagataag	ttgaccgtcg	1140
aaagagctag	aaagattcaa	agattcttgt	ctcaaccttt	cgctgtcgct	gaagtcttca	1200
ctggtatccc	aggtagattg	gtcagattaa	aggacaccat	ctcttctttc	aaggctgtct	1260
tggacggttaa	gtacgatcac	ttg				1283

<210> 475

<211> 1290

<212> DNA

<213> *Candida tropicalis* ATCC 13803

<400> 475

cgacgaaggt	aacttgccag	ctattttgaa	tgctttgact	ttgaagaacg	gtgaccaaga	60
cttggttttg	gaagttgctc	aacatttggt	tgaaaacacc	gtcagggtca	ttgctatgga	120
tggtaccgaa	ggtttagtca	gaggtactgc	tgctactgat	accggtgctc	caattttctgt	180
cccagttggt	agaggtacct	tgggtagaat	tatcaacggt	ggttggtgaac	caattgatga	240
cagaggtcca	attgaatgta	aggaaagaaa	gccaattcac	gctgaaccac	cttcattcgt	300
tgaacaatct	actgctgccg	aaattttgga	aaccggtatt	aagggtgtcg	atttggtggc	360
tccttacgct	agaggtggta	agattgggtt	gttcggtggt	gctggtgtcg	gtaaaaccgt	420
ttctatccaa	gaattgatta	acaacattgc	caaagctcat	ggtgggtttct	ctgtctttac	480
cggtgtcggg	gaaagaacca	gagaaggtaa	cgattttgtac	cgtgaaatga	aagaaactgg	540
tgcatcaaac	ttggaagggt	actccaaggt	cgccttggtc	ttcgggtcaaa	tgaacgaacc	600
acctggtgct	agagctagag	ttgctttgac	tggtttgacc	attgctgaat	acttcagaga	660
tgaagaaggt	caagatgtct	tggtgttcat	tgacaacatt	ttcagattca	ccaagctgg	720
ttccgaagtg	tctgctttgt	tgggtcgtat	tccatctgct	gtcgggttatc	aaccaacctt	780
ggccactgat	atgggtcttt	tgcaagaacg	tattaccacc	accaagaaag	gttctgttac	840
ttctgtccaa	gctggtttatg	tcccagccga	tgatttaacc	gatccagctc	cagctaccac	900
cttcgctcac	ttggatgcca	ctactgtctt	gtctagaggt	atttctgaat	tgggtattta	960
cccagctgtc	gatccattgg	attctaaatc	cagattattg	gatgctactg	ttgttggtca	1020
agaacattat	gatgttgcca	ctggtgttca	acaaacttta	caagcttaca	agtccttgca	1080
agatatcatt	gctatttttg	gtatggatga	attgtccgaa	gccgataaat	tgactgtcga	1140
aagagctcgt	aagattcaaa	gattcttgct	ccaaccattc	gctgttgccg	aagttttcac	1200
tggtatccca	ggtagattgg	ttagattaca	agatactgtt	aaatctttca	aagatgtctt	1260
ggaaggtaaa	tacgatcact	tgccagaaaa				1290

<210> 476

<211> 1267

<212> DNA

<213> *Candida utilis* strain Csp 388

<400> 476

tttgaacgcc	cttgagatca	agaaccacga	gtctggaaga	ttggctcctcg	aggttgcccc	60
gcacttggtg	gagaacactg	tcagaactat	tgccatggat	ggtaccgaag	gtctcgtccg	120
tggtgagctc	gttggttgaca	cgggttctcc	aattactgtc	ccagttgggtc	gtgagacctt	180
gggtcgtatc	atcaacgtta	ttggtgagcc	aattgatgag	cggtggtccaa	tcaacaccaa	240
gcacagaaac	ccaattcacg	ctgagccacc	atccttcgct	gagcagtcta	ctgctgctga	300
ggttttggag	actggtatca	agggtgtcga	ccttctcgcc	ccatacgcca	gaggtggtaa	360
gattggtctc	tttggtgggtg	ccggtgtcgg	taagaccgtt	ttcatccagg	agttgattaa	420
caacattgcc	aaggccacag	gtgggtttctc	tgttttcacc	ggtgtcgggtg	agagaaccag	480


```

agaggggtaac gatttgtacc gtgagatgaa ggagactggg gtcacatcaatc tgcaggggtga 540
gtccaagggtt gctctcgtct tcggtcagat gaacgagcca ccagggtgcc gtgcccgtgt 600
cgcttttgacc ggtttgacca ttgctgagta cttcagagat gaggaggggtc aggatgtctt 660
gttgttttatt gacaacattt tcagattcac ccaggccggg tccgagggtgt ctgccttggc 720
tggtcgtatt ccatccgctg tcggttacca gccaaactttg gccaccgata tgggtttgtt 780
gcaggagaga attaccacca cccagaaggg ttccgctcact tctgtccagg ccgtttacgt 840
cccagctgat gatttgactg atcctgctcc agccaccact ttcgcccact tggacgccac 900
cactgtgttg tcccgtggta tctctgagtt gggtatttac ccagctgtcg acccattgga 960
ctccaagtcc agattgttgg acgctgccgt tgttggtgac gagcactaca acaccgccac 1020
cgatgtccag cagacccttc aggtttacaa gtctctccag gatattcatt ctattttggg 1080
tatggatgag ttgtctgagg ctgacaagtt gactgtcgag agagccagaa agattcagcg 1140
tttcctttcc cagccattcg ctgtcgtgga ggttttcacc ggtatcccag gtagattggg 1200
tagacttcag gacaccatca agtccttcag agaggttttg gacggtaagt acgaccactt 1260
gccagag                                           1267

```

<210> 477
 <211> 1296
 <212> DNA
 <213> Candida viswanathii ATCC 28269

```

<400> 477
ccaattcgac gaaggtagct tgccagctat cttgaacgcc ttgaccttga agaacgggtga 60
ccaagacttg gtcttggaag ttgcccaaca cttgggtgaa aacactgtca gagctattgc 120
tatggatggg accgaagggt tggtcagagg tactgtctgc actgacaccg gtgctccaat 180
ctccgtccca gtcggtagag gtaccttggg tagaatcatc aacgttggtg gtgaaccaat 240
tgacgacaga ggtccaattg aatgtaagga aagaaagcca attcacgctg aaccaccttc 300
tttcgttgaa caatccactg ctgccgaaat tttggaaacc ggtatcaagg ttgtcgactt 360
gttggtccca tacgccagag gtggttaagat tgggtttgttc ggtgggtgcc gtgtcggtaa 420
gactgtcttt atccaagagt tgattaacaa cattgccaag gccatgggtg gtttctctgt 480
cttcaactgg gtccgtgaaa gaaccagaga aggtaacgat ttgtaccgtg aaatgaagga 540
aaccggtgtc atcaacttgg aagggtgactc caagggtgcc ttgggttttc gtcaaataaa 600
cgaaccacct ggtgctagag ctagagttgc tttgactggg ttgaccattg ccgaataact 660
cagagacgaa gaaggtcaag atgtcttgtt gtttattgac aacattttca gattcaccca 720
agccggttcc gaagtgtctg ctttgttggg agatattcca tctgccgtcg gttatcaacc 780
aaccttggcc accgatatgg gtcttttgca agaacgtatt accaccacca agaagggttc 840
cgtcacctct gtccaagctg tctatgtccc agccgatgat ttgaccgatc ctgctccagc 900
caccaccttc gctcacttgg atgccactac tgtcttgtct agaggtattt ccgaattggg 960
tatctaccca gctgtcgatc cattggactc caagtccaga ttgttggtat ctgctgttgt 1020
ttgtcaagaa cattacgatg ttgccactgg tgtccaacaa accttgcaag cttacaagtc 1080
tttgcaagat atcattgcca ttttgggtat ggatgaattg tctgaatccg ataagttgac 1140
tgtcgaaaga gctcgtaaga tccaaagatt cttgtcgcaa ccatttgctg ttgccgaagt 1200
tttcaactgg atcccaggta gattagttag attgtcgtaa accgtccaat ctttcaaaga 1260
cgtcttggct ggtaaatacg atcaactgcc agaaaa                                           1296

```

<210> 478
 <211> 1295
 <212> DNA
 <213> Candida zeylanoides ATCC 7351

```

<400> 478
tcaattcgag caaggcaacc tccctgccat cttgaacgct ctcaccttga agaattgggtga 60
caacgacttg gttttggaag ttgccagaca cttgggtgag aacaccgtca gagccattgc 120
catggatggg accgaggggt tggtagagg tgcgtccgtc aaggacactg gcgcccctat 180
ctcgggtccc gttggccgag ggactttggg tcgtatcatc aacgtcaccg gtgaccccat 240
tgacgagaga ggtcccatcg agctgaccca gagaaaccct atccacgcgc accccccctc 300
gttcggttgg cagtccacca acgctgaggt tttggagact ggtatcaagg ttgtcgattt 360
gttggtctcc tacgccagag tggttaagat tgggtttgtc ggtgggtgcc gtgtcggtaa 420
gaccgtcttc attcaggagt tgatcaacaa catcgccaag gccacgggtg ggttctcggt 480
cttcaactgg gtcggtgaga gaactagaga gggtaacgac ttgtaccgtg agatgaagga 540
gaccggtgtc atcaacttgg aggggtgactc caagggtggc ttgggtgttc gtcagatgaa 600
cgagccccct ggagccagag ccagagtcgc cttgaccggg ttgaccattg ccgaataact 660
tagagacgag gagggtcagg atgtgttggg ttgtcgtcgc aacatcttca gattcaccca 720
agctggttcg gaggtgtcgg ccttgttggg tcgtattccc tctgccgtcg gttaccagcc 780
caccttggca actgatatgg gattgttgca ggagcgtatc accacgacca agaagggttc 840

```

```
cgtcacctca gtgcaggccg tctacgtccc cgctgatgac ttgactgacc ctgctccccc 900
caccaccttt gccacttgg acgccaccac cgtgttgtcc agaggtatct ctgagttggg 960
tatctacccc gccgtcgacc ccttggactc caaatcgaga ttgttggacg ctgccgtggt 1020
cggtcaggag cactacgatg ttgcctcgaa cgtccagcag accttgcagg cctacaagtc 1080
cttgcaggat atcattgcca ttttgggtat ggatgagttg tccgaggctg acaagttgac 1140
cgttgagaga gccagaaaga tccagagatt cttgtcgag cccttcgctg ttgccgagg 1200
tttactgggt atcaagggtg gattgggtcag attggaggac accgtcagat ctttcaagga 1260
ggttttggag ggtaagtacg accacttgcc cgaga 1295
```

<210> 479
<211> 534
<212> DNA
<213> *Coccidioides immitis* strain Silveira

```
<400> 479
ttcaggaatt gattgtaagt tctgttatca actaaagccg acagcggttg ctgatatgct 60
ctagaacaac attgctaagg ctacacgttg ttactccgtg ttcactgggtg tccggtgagcg 120
taccctgtgag ggtaacgatt tgtaccatga aatgcaagag acccgtgtca ttcaactcga 180
cggagagtgcc aagggtcgctc ttgtcttcgg tcaaatgaac gagccccctg gtgcccgtag 240
ccgtgttgcc cttaccgggt tgaccattgc tgaatacttc cgtgacgagg aaggccaaga 300
cggtaggctt catgcttcta tcgctagggg cgtgtgatac aggaggctaa tcgcttttct 360
agtgtttctc tttattgaca acattttccg tttactcaa gctggttctg aagtgtctgc 420
cttgtcgggt cgtattcctt ccgctgtcgg ttaccaacct actctcgccg tcgacatggg 480
tgttatgcag gaacgtatca ccaccaccac caagggatcc attacttcag tgca 534
```

<210> 480
<211> 494
<212> DNA
<213> *Cryptococcus albidus* ATCC 66030

```
<400> 480
cgtcttgatt caagaattga tcaacaacat cgccaaggcc cacggtggtt actcggctctt 60
caccggtgtc ggtgagcgaa ctcgagaggg taacgatctg taccacgaag tgagttgcgc 120
cgtccgagtg tttcccgggg aatcgcaaga ctgatgttgt cccttcttct cagatgaggg 180
aaaccgggtg catcaacctc gaggggtgact ccaagggtcg cttggtcttc ggtcagatga 240
acgagcccc tggagcccga gcccgagtcg ccttgaccgg tttgaccatt gccgaatact 300
tccgagacga ggagggtcag gatgtcttgt tgttcattga caacattttc cgattcacc 360
aagccgggtc cgaagtgtcc gccttggttg gtcgtatccc ctccgccgtc ggttaccagc 420
ccactctgtc caccgacatg ggtaccatgc aggagcgaat taccaccacc aagaagggtt 480
ccatcacttc cgtc 494
```

<210> 481
<211> 415
<212> DNA
<213> *Fusarium oxysporum* strain WSA-212

```
<400> 481
ttcaggagct tatcaacaac atcgccaagg cccacggttg ttactccgtc ttcactgggtg 60
tcggtgagcg aactcgtgag ggtaacgatc tgtaccacga aatgcaggag acttccgtca 120
ttcagcttga tggcgagtcc aagggtcgcc ttactgtagc tgaatacttc agagatgagg 180
gagctcgtgc ccgtgtcgcc cttaccggtc ttactgtagc tgaatacttc agagatgagg 240
agggtcagga cgtgctgctc ttcattgaca acattttccg attcactcag gccgggttccg 300
aggtgtctgc cttctcgggt cgtatccctt ctgccgtcgg ttaccagccc accctcgccg 360
tcgacatggg tggtatgcaa gacggtatta ccaccaccac caagggttcc attac 415
```

<210> 482
<211> 1281
<212> DNA
<213> *Geotrichum* spp. strain LEV-4

```
<400> 482
aggacaacct ccccgctatt cttaacgctc ttgagcttaa gagagataac ggtgagaagc 60
```

```
tcgttctcga ggttgcccag catctgggtg agaacactgt ccgtactatt gctatggacg 120
gtactgaggg tctcgtccgt ggtcagcccg ttgttgacac cgggtgcccc attaccattc 180
ccgttggtcg tggtagctct ggtagaatta tcaacgtcat tggtagagccc atcgatgagc 240
gtggacccat tgaggctacc aagtacctcc ccattccacac cgagcccccc accttcgctg 300
agcagtctac ctccgctgag gttcttgaga ctggtatcaa ggttgctgat ctccttgccc 360
cctacgcccc tgggtggaag attggtctct tcggtggtgc cgggtgctggt aagaccgttt 420
tcattcagga gctgattaac aacattgcca aggccatgg tggtttctcc gttttcaccg 480
gtgtcggtga gagaacccgt gagggtaacg atttgtagcg tgagatgaag gagaccggtg 540
tcatcaacct cgaggggtgag tctaaggctc ctctcggttt cggtcagatg aacgagcccc 600
ctggagcccc tgcccgtgtt gctcttactg gtcttaccat tgctgagtag ttccgtgatg 660
aggaggggtca ggatgtgttg ctcttcgttg acaacatttt cggttaccag cccacccttg 720
ccgaggtgtc tgcccgtttg ggtcgatttc cctccgctgt cggttaccag cccacccttg 780
ccactgatat gggtgcccct caagagcgta ttaccaccac ccagaagggt tccgtcactt 840
ccgtccaggg cgtctacgtc cctgccgatg atttgaccga tccgtccccct gctaccacct 900
tcgcccattt ggatgccacc accgtcttgt cgcgttccat ttctgagttg ggtatctacc 960
ccgctgtcga tccccctgat tccaagtcct gtcttttggg tatcaccgtc gttggccagg 1020
agcactacga tgttgctacc caggtccagc agaccctcca gtccataaag tctcttcagg 1080
atatcattgc cattttgggt atggatgagt tgtctgaggg tgataagctt actgtcgagc 1140
gtgcccgtaa gatccagaga ttcccttccc agcccttcac tgctcgctgag gttttcactg 1200
gtatcgaggg ccgtctcgtt cctttgaagg acactgttcg ctctttcaag gagatccttg 1260
agggcaagta cgaccacctc c 1281
```

<210> 483
<211> 586
<212> DNA
<213> *Histoplasma capsulatum* strain G186A5

```
<400> 483
attcaagaat tgatcgtagc ttccctccgc ccacacacga tcaatggaga aagaaacaaa 60
ttttttggga gtggtcattt tttctaataa ttogaataga acaacattgc caaagccac 120
ggtggttact ccgtgttcac tgggtgctggc gagcggaccc gtgaaggaaa tgacttgtac 180
cacgaaatgc aggaaccccg tgttatccag ctcgatggag agtccaaggt cgcctcgtt 240
ttcggtcaga tgaacgagcc tcccggagcc cgtgcccgtg ttgccctcac tggctgacc 300
gttgccgagt acttccgtga cgaggaaggg gattgaaacc tgtataagta tacaccgtag 360
caaataca caagagcttca ctacgcctcg gatttagtgc ttctcttcat cgacaacatt 420
ttccgcttca ctcaggccgg ttccgaagtg tctgccctgc tcggccgtat tccctccgcc 480
gtcggttacc aacccaccct cgcctgggac atgggtggta tgcaggaacg tatcaccact 540
accaccaagg gctccatcac ctctgtgcar gccgtctacg tccccg 586
```

<210> 484
<211> 1145
<212> DNA
<213> *Malassezia furfur* ATCC 42132

```
<400> 484
gcgtggccag aaggtcattg acactgggtc tcccatcacc atccccgtcg gtggtgccac 60
actgggtcgt attctgaacg tcacgggtga cctattgac gagcgtggcc ccgttaagac 120
tgacgttttc cgcccattc accgtgaccc cctgccttt gtcgagcagt cgactgatgc 180
cgagattctc gagactggta tcaaagtcgt tgacctgatt gcccttacg cccgtgggtg 240
taagattggt ctgttcggtg gtgcccgtgt cggtaagacc gtgcttatcc aggagctcat 300
caacaacatc gccaaagccc acgggtggtt ctccgtgttc actggtgtcg gtgagcgtac 360
tcgtgagggg aacgatttgt accacgagat gattgaaacc ggtgtcatta acctcgaggg 420
tgactcgaag gtggctctgg tgttcggtca gtgaacgag cccccgggtg cccgtgcgcg 480
tgtcgtctct actggtctga ctgtggccga gtacttccgt gacgacgagg gccaggatgt 540
gctgctgttc attgacaaca ttttccgttt cccccaggcc ggttcggaga cttcggctct 600
gctgggtcgt atcccttcgt cggtcggtta ccagccact ttgtcgaccg atatgggtgc 660
catgcaggag cgtatcacca ccaccaagaa ggttccgatt acgtcggtgc aggccgtcta 720
cgtgcccgcc gatgatgtca ctgacctgc cctgccact accttcgccc accttgacgc 780
taccactgtg cttgaccgtt cgatcgctga gctgggtatc taccocgctg ttgaccggtt 840
gaactcgaac tcgcgtatgc ttgacccgc tattgtgggt caggagcact acgacgtggc 900
ctctggcggt cagaagctgc tccaggacta caagtgcgtt caagatatca ttgccattct 960
gggtatggat gagctttctg agggagacaa ggtcactgtc gagcgtgccc gtaagatgca 1020
gcgtttcatg tcgcagcctt tcgctgtcgc ccaggtcttt actggtatcg aaggtcgtct 1080
tggtgcccct aaggacacga tcaaggcctg caaggagatc ctgtcgggca agcacgacaa 1140
```

cctcc

<210> 485
<211> 1261
<212> DNA
<213> *Malassezia pachydermatis* ATCC 42756

```
<400> 485
tcccgcacatc ttcaacgccc tggaggtcca ggacatgaag aacggtggcc gccttggtct 60
ggaggttgcc cagcaccttg gtgagaacac tggttcgttg attgctatgg acggtaccga 120
gggtccttgc cgtgggcaga aggtccttga cactggtgcc ccgatcata tccctgtcgg 180
taacgggtacc ttgggcccgya tcctgaacgt cactggtgag cctgtggatg agcgtgggtcc 240
ggttaagact gacgtctacc gtccaatcca ccgtgagccc ccggcggttcg ttgagcagtc 300
gactgatgct gagattcttg agactggtat tgcyggtgty ggtaagaccg tgctgattca 420
tcgtggtggt aagattggtc twttcggtgg cgggtggttc tcggtgttca ctggtgtcgg 480
ggagcttata aacaacattg ccaaggccca ccatgaaatg attgagactg gtgtcatcaa 540
tgagcgctact cgtgagggtg acgatctgta gttcgggtcag atgaacgagc ccccggtgac 600
cgttgacggg gactcgaagg tcgctctcgt gttcgggtcag atgaacgagc ccccggtgac 600
ccgtgcccgt gtcgcccctga cyggtctgac catcgccgag tacttccgtg acgacgaggg 660
tcaggatgtg ctgctcttca ttgacaacat tttccgttcc actcagggtg gttcggagac 720
ttcggctctg ctgggtcgta tcccgtcggc tgtcgggttac cagccakccc ttgccacgga 780
tatgggtgcc atgcaggarc gtatyaccac caccaagaag ggttcgatta cctcgggtgca 840
ggcygtttac gttccggccc acgatgtgac tgaccctgcc ccggccacga ccttcgcccc 900
cttgagcgcc accacgggtg tggaccgttc gattgcygag ctgggtatct acccgccctg 960
cgaccgctg aactcgaagt cgcgtatgct tgaccctgca attgtcggtg tggagcacta 1020
caacgttgct tcgggtgtcc agaagcttct ycaggactac aagtcgctcc aagatatcat 1080
tgccattctg ggtatggatg agttgtcgga ggaggacaag ctactgtcgg agcgtgcccc 1140
taagatgcag cgtttcctgt cgcagccttt cgctgtggcc caggtcttca ctggtatcga 1200
gggtcgtctt gtgtcgtctc aggacaccat caacgcctgc aaggagattc tgtccggtaa 1260
g 1261
```

<210> 486
<211> 1282
<212> DNA
<213> *Metschnikowia pulcherrima* DSM 70336

```
<400> 486
aggagggcaa cttgccagct atcttcaacg ctttgacgtt gaagaacggc gaccagaagt 60
tggtccttga ggtggcccag cacttggttg agaacaccgt cagaaccatt gccatggacg 120
gtaccgaggg tttggtcaga ggcgcctctg tcaccgacac ygggtgcccct atctccgtgc 180
ctgtcggccg tgagaccttg ggtcgtatta tcaatgttgt tgggtgagcca atcgacgaga 240
gaggcccaat caacaccaag aagagaaacc ctattcacac cgaccacct tcgtttgtcc 300
agcaatccac ttccgcccag gtcttggaga ctggtatcaa ggttgtcgac ttgttggccc 360
cttacgccag aggtggtaag attggtttgt tcggtggtgc cgggtgtcgg aagaccgtgt 420
tcattccagga gttgattaac aacattgcc aaggcccagg tggtttctcc gttttcaccg 480
gtgtcgggtg gagaaccaga gagggtaac atttgtaccg tgaaatgcag gagactggtg 540
tcattcaact cgagggtgac tccaaggtcg ccttgaccg gtttgaccat cgccgagtag ttcagagacg 600
caggagctag agcyagagtt gccttgaccg gtttgaccat cgccgagtag ttcagagacg 660
aggaggggtc ggatgtgttg ttgttcgtcg acaacatttt cagattcacc caagccggtt 720
ctgaggtgtc tgccttggtg ggtcgtatcc catccgctgt cggataccag ccaaccttgg 780
ccaccgatata ggggtgccttg caggagagaa ttaccaccac caagaagggt tccgtcacct 840
ccgtccaggc cgtctacgtg ccagccgatg acttgactga cctgcgccca gccaccactt 900
tcgccacttt ggacgccacc actgtgttgt ccagaggtat ctctgagttg ggtatctacc 960
ccgtgtcga ccccttggac tccaactcca gattgttggg cgccaccgtt gttggccagg 1020
agcactacga cgtcgccacc aacgtccagc aaactttaca agcttacaag tccttgcagg 1080
atatcattgc cattttgggt atggatgagt tgtccgagac ccgacaagtt gaccggtcga 1140
gagagccaga aagatccaga agttcttgtc ccagccattt gccgtcgccg aggttttcac 1200
cgttattgag ggtagattgg ttagattgga ggacaccgtt agatccttta aggaggtttt 1260
ggaaggtaag tacgaccact tg 1282
```

<210> 487
<211> 482
<212> DNA

<213> *Penicillium marneffei* strain WSA-214

<400> 487
tgtctttatc caggagttga ttgtacgtct ttacctttct gcctgactgt ttacgacaac 60
taacgaaagc gtagaacaac attgccaagg ctcacgggtg ttactctgtc ttcactgggtg 120
tcggtgaacg tactcgtgag ggtaacgatt tgtaccacga aatgcaggaa actgggtgtca 180
ttcagctcga ggggtgaatcc aaggtcgccc tcgtgttcgg tcagatgaac gagccccccg 240
gtgcccggtc ccgtgtcgct cttactgggt tgaccattgc cgagtacttc cgtgacgagg 300
aaggtcagga cgtgcttctc ttcatlgaca acattttccg tttcactcag gccgggttctg 360
aggtgtctgc cttctgggt cgtatcccct ctgccgtcgg ttaccagccc acccttgccg 420
tcgacatggg tatcatgcag gagcgtatta ccaccaccac caagggttcc atcacctccg 480
tc 482

<210> 488

<211> 1290

<212> DNA

<213> *Pichia anomala* ATCC 18205

<400> 488
tcgaacaagg taacttacca gctatcttga atgctttaga aatcaaaaacc ccaagtggta 60
ctccattagt tttagaagtt gctcaacatt taggtgaaaa cactgtcaga actattgcta 120
tggtatgggtac tgaaggttta gttcgtgggtg aacaagttac tgatactggt tctccaatca 180
ctgtcccagt tggctcgtgaa acttttaggtc gtattatcaa cgttgttgggt gaaccaattg 240
atgaacgtgg tccaattaac accaaacaaa gaaacccaat tcacgctgaa ccaccttcat 300
tcagtgaaca atcaactgct gctgaagttt tagaaactgg tatcaaagt gtygatttat 360
tagctccata cgctagaggt ggtaaaattg gtttattcgg ttggtgccgggt gtcggtaaaa 420
ctgtctttat ccaagaattg attaacaaca ttgctaaagc tcatggtgggt ttctcagttt 480
tcaccgggtg tgggtgaaaga accagagaag gtaacgattt ataccgtgaa atgaaagaaa 540
ctggtgttat taacttggaa ggtgattcta aggtcgcttt agttttcgggt caaatgaatg 600
aaccaccagg tgctagagct cgtgttgctt taactgggtt gaccattgct gaataacttca 660
gagatgaaga aggtcaagat gttctgttat tcgttgataa cattttcaga ttcaccaag 720
cgggttcaga agtttctgcc ttattaggtc gtattccatc tgctgtcgggt tatcaaccaa 780
ctttagcaac tgatatgggt ttgttacaag aacgtattac caccacacaa aaaggttcag 840
ttactttctgt ccaagctggt tatgtcccag ctgatgattt aacagatcct gctccagcta 900
ccactttcgc ccatttggat gctactactg tcttgtctcg tggattttca gaattaggta 960
tttaccagc tgctgatcca tttagttcta aatcaagatt attagatgct tcagttgttg 1020
gtcaagaaca ttatgatggt gctaccaacg ttcaacaaac tttacaagct tacaatctt 1080
tacaagatat tattgctatt ttagggtatg atgaattgtc tgaacaagat aaattgactg 1140
tcgaaagagc aagaaaaatc caaagattct tatctcaacc atttgctgtt gccgaagt 1200
tcactgggtat yccaggtaga ttggttagat taaaagacac tatcaaatca ttcaaagatg 1260
ttttggaagg taaatatgat cacttaccag 1290

<210> 489

<211> 1291

<212> DNA

<213> *Pichia anomala* ATCC 2149

<400> 489
ccaattcgaa caaggtaact taccagctat cttgaatgct ttagaaatca aaaccccaag 60
tggtactcca ttagtttttag aagttgctca acatttaggt gaaaacactg tcagaactat 120
tgctatggat ggtactgaag gttagtccg ttggtgaacaa gttactgata ctggttctcc 180
aatcactgtc ccagttgggtc gtgaaacttt aggtcgtatt atcaacgttg ttggtgaacc 240
aattgatgaa cgtgggtccaa ttaacaccaa acaaagaaac ccaattcacg ctgaaccacc 300
ttcattcagt gaacaatcaa ctgctgctga agtttttagaa actggaatca aagttgttga 360
tttattagct ccatacgcta gaggtggtaa aattgggtta ttccggtgggt ccggtgtcgg 420
taaaactgtc tttatccaag aattgattaa caacattgct aaagctcatg gtggtttctc 480
agttttcacc ggtgttgggt aaagaaccag agaaggtaac gatttatacc gtgaaatgaa 540
agaaactggt gttatttaact tggaagggtg ttctaagggt gcttttagtt tcggtcaaat 600
gaatgaacca ccaggtgcta gagctcgtgt tgcttttaact ggtttgacca ttgctgaata 660
cttcagagat gaagaagggt aagatgtctt gttattcgtt gataacattt tcagattcac 720
ccaagccggt tcagaagttt ctgccttatt aggtcgtatt ccactgtctg tcggttatca 780
accaacttta gcaactgata tgggtttgtt acaagaacgt attaccacca cacaaaaagg 840
ttcagttact tctgtccaag ctgtttatgt cccagctgat gatttaacag atcctgtctc 900
agctaccact ttcgcccatt tggatgctac tactgtcttg tctcgtggta tttcagaatt 960

aggatatttac	ccagctgtcg	atccattaga	ttctaaatca	agattattag	atgcttcagt	1020
tgttggtcaa	gaacattatg	atggttgctac	caacggttcaa	caaactttac	aagcttacaa	1080
atctttacaa	gatattattg	ctattttagg	tatggatgaa	ttgtctgaac	aagataaatt	1140
gactgtcgaa	agagcaagaa	aatccaaag	attcttatct	caaccatttg	ctgttgccga	1200
agttttcact	ggtatcccag	gtagattggt	tagattaa	gacactatca	aatcattcaa	1260
agatgttttg	gaaggtaa	atgatcactt	a			1291

<210> 490

<211> 508

<212> DNA

<213> *Rhodotorula minuta* ATCC 10658

<400> 490

cgtattgatt	cgtgagtg	cgttccctta	cagcaagctt	ataaaggagc	gaaaaagatc	60
tgacattcgg	cttatgtgct	atacagagga	actcatcaac	aacgtcgcca	aggctcatgg	120
tggttactct	gtcttcaccg	gtgtcggaga	gcgaacacgt	gaaggtaacg	atctctacca	180
cgaaatgatt	gaaaccggtg	tcattcagct	caagaacgac	aagtccaagg	ccgctctggt	240
cttcggacag	atgaacgagc	cccccgagc	tcgtgcccg	gtcgctctga	ccggtctcac	300
catcgccgag	tacttccgtg	acgtcgaagg	acaggatgtg	ctactcttca	tcgacaacat	360
tttccgattc	acccaggccg	gttcagaggt	atctgcctcg	ctcggaacgt	tcccatctgc	420
tgtcggatac	cagccacac	tctcaaccga	tatgggtggt	atgcaagagc	gaatcacac	480
caccaagaag	ggttcgatta	cctccgtc				508

<210> 491

<211> 686

<212> DNA

<213> *Rhodotorula mucilaginosa* ATCC 66034

<400> 491

tgtcttcatt	caggagctca	tcaacaacat	cgccaaggcc	cacggtggtt	actcggtctt	60
caccggtgtc	ggcgagcgta	cccgtgaggg	taacggtgag	tctccccctt	caaacttttg	120
gccggctagt	tggcgagcgc	caaactgacg	cgcgcgccct	gtccagactt	gtaccacgag	180
atgatcgaga	ctggtgtcat	ccagctcgag	aacgacaact	cgaagtgcgc	tctcgtgttc	240
ggccagatga	acgagcccc	tgggtgccgt	gcccgtgtcg	ctctcactgg	gttcgtctct	300
tctctctctc	gagcgtctctg	gcttgatacg	gaacgctgac	acgtcacgca	gtctcactat	360
tgtcgagtac	ttccgtgacg	aggagggcca	ggacgtgctc	ctcttcacgc	acaacatctt	420
ccgtttcacc	cagggtgagc	cgcctccgcg	ggcattctcc	cgtttcttct	gcgctgacgt	480
ctgtcccgtg	tagccgggtc	ggaggtgtct	gcccctctcg	gacgtatccc	gtccgctgtc	540
ggataccagc	cgaactctctc	gaccgacatg	ggtcagatgc	aggagcgtat	cacgtaagtt	600
tggccgcagc	tccgtccgcg	gcgccttttg	tgtctgaccg	tgttccaccg	ctcagcacca	660
ccaagaaggg	ctcgatcacc	tgtgtc				686

<210> 492

<211> 625

<212> DNA

<213> *Sporobolomyces salmonicolor* ATCC 32311

<400> 492

tgtcttgatt	caggagctca	tcaacaacgt	cgccaaggcg	cacggtggtt	actccgtttt	60
caccggtgtc	ggtgagcgta	cccgtgaggg	taacggtgag	cacactttcg	ccgacctggc	120
cattccggaa	cgtgcggact	gacgaggacc	acctcgaaca	gatctctacc	acgagatgat	180
cgagaccggt	gtcattcagc	tcgacaacga	caagtgcgaag	actgctctcg	tcttcggcca	240
gatgaacgag	ccccctggcg	cccgtgcccg	tgtcgtctct	actggtctca	ccatcgcgga	300
gtacttccgt	gacgacgagg	gccaggacgt	gcttctcttc	atcgacaaca	tcttccggtt	360
cacccagggt	acgttcgata	ccgcccgtcc	aacacgaatg	tcgtggtgac	tgacaacctg	420
ttgcgcgtgc	agccgggttcg	gaggtgtctg	cccttctcgg	tcgtatcccc	tccgctgtcg	480
gataccagcc	cactctctcg	accgacatgg	gtggcatgca	ggagcgtatc	acgtacgccc	540
tcttctgctt	tctctcgttt	cgctctgcat	cgctcacgca	tgttcgcccc	acagcaccac	600
caagaagggt	tcgatcacct	gtgtc				625

<210> 493

<211> 1211

<212> DNA
<213> *Sporothrix schenckii* strain WSA-148

<400> 493
tctcgtccgt ggtgctaagg ccaactgacac tgggtccccc attaccatcc ccgtcggccc 60
cggtagccctc ggtcgcatca tgaacgtcac cggtagcccg atcgacgagc gcggtcccat 120
caagaccgac aagttccgtc ccatccacgc tgaggctccc gagttcgttg accagtcgac 180
caccgctgag gttctcgtga ctggtatcaa ggtcgtcgat ctgcttgctc cctacgccc 240
tggtggttaag attggtctgt ttggcgggtgc cgggtgttggc aagaccgtgt tcatccagga 300
gctcatcaac aacatcgcca aggcccacgg tggttactcc gtcttcaccg gtgtcggcga 360
gcgtaccctg gagggtaacg atctgtacca cgaaatgcag gagacctctg tcattcagct 420
tgacgggtgac tccaagggtc ccctgggtgtt cggtcagatg aacgagcccc ctggtgctcg 480
tgcccgtgtc gccttgaccg gtttgactgt cgctgagtac ttccgtgacg aggagggcca 540
ggatgggtatg ttttgaatta tttccttgct gtacagttcc aaatcgaaga attactaact 600
tgtcagtgct tctcttcacg gacaacattt tccgcttcac ccaggccggt tctgaggtgt 660
ctgccccttct gggtcgtatt ccctccgctg tccggtacca gccacgctc gccgtggaca 720
tggtgtctgat gcaggagcgt attaccacca cccgcaagggt ctcaattacc tccgtccagg 780
ccgtctacgt gcccgctgac gatctgacgg atcccgcacc cgccaccacc ttcgcccac 840
tggtgcccac cactgtgctg tcccagaggt tctctgagct gggtagctac cccgctgtcg 900
acccctctga ctccaagtcg cgtatgctgg acccccgat tgtcgggtgac gaccactacg 960
agaccgccac tcgctgccag cagatcctcc aagagtacaa gtcgctgcag gacatcatcg 1020
ccattctggg tatggacgag ctgtctgagg ccgacaagct tacagtcgag cgtgctcgta 1080
agatccagcg tttcctgagc cagccgttca cggtcgcgca ggtcttcaact ggtatcgaag 1140
gccagctggt cgatctgaag gacactatcg ctctgttcaa ggctatcctg agcgggtgag 1200
gtgacagcct t 1211

<210> 494
<211> 1133
<212> DNA
<213> *Stephanoascus ciferrii* ATCC 52550

<400> 494
tcttggttaga ggcacccag tcaaggacac tgggtgctcca attaccattc cagttggtaa 60
cggcactttg ggccgtatcg tcaacgttct cggtagacca attgatgagc gtggaccagt 120
caaggctgac aagttcagac ctattcacgc tgagccacca accttcgctg accagtcac 180
ctctgccgag gttcttgaga ccggtattaa ggttgctgac ttgcttgccc cttatgccag 240
aggtggttaag attggtcttt tcggtggtgc cgggtgctggg aagactgtgt tcattcagga 300
gcttattaac aacattgcta aggccacgg tggttactct gtcttcaact gtgtcgggtga 360
tcgaactcgt gaaggtaacg atttgtacca cgaaatgatg gagaccggtg tcatcaacct 420
tgaggggtgac tccaagggtg ctcttggtgt cggtcagatg aacgagcctc caggagccc 480
tgcccgtgtt gccttgaccg gtttgaccat tgccgagtac ttcagagatg aggagggcca 540
ggatgtcttg ttgttcattg acaacatttt ccgattcacc caggccggtt ctgaggtctc 600
tgcttgtgtt ggtcgtatcc catctgccgt cgggtaccaa ccaaccttg ctactgatat 660
gggtggtctt caagaacgta ttaccaccac tcaaaagggt tccgtcacct ctgtccaggc 720
tgtctacgtc ccagctgacg atttgactga tctgccccca gctaccacct tcgcccattt 780
ggacgccacc accgaattgt cccgatctat ctctgagttg ggtatctacc cagctgtcga 840
ccctcttggt tccaagtcce gtcttttgga tgccctccgtc gtcggccaag agcactacga 900
cgttgccgcc aacgtccaac agaccttgca ggctacaag tctctccagg atatcattgc 960
cattttgggt atggagcaat tgtctgagcg tgataagctc actgtcgagc gtgtcgttaa 1020
gatgcagaga ttcttttctc agccattcac cgtcgtctgag gtcttcaact gtctcgaggg 1080
tagactcgtt tctttgaagg acaccatccg atccttcaag gagatccttg acg 1133

<210> 495
<211> 608
<212> DNA
<213> *Trichophyton mentagrophytes* strain WSA-225

<400> 495
ggagttgatt gtaagtcatt tgaaacccag cccaagaaa cagaagctag gcgaaaattg 60
gacaattgag caatttagcc attggagaaa agaaatttcg agtattaatt gtttttatag 120
aacaacattg ccaaggctca cgggtggttac tctgtcttca ctggtgtcgg agagcgtacc 180
cgtgaaggaa acgatctcta ccatgaaatg caggagaccg gtgtcattca gtgtgatggc 240
gagtccaagg tcgcccgtgt ctctggccag atgaacgagc cccaggtgac ccgtgcccgt 300
gttgctctta ctgggttgac cattgctgag tacttccgtg atgaggaagg tcaagacggt 360

```

gagttttctta tggataaaaa aaaattttttt tttttttttt tttttttcaa gaaattcatg 420
ttctaacaaa gtgtatttcta gtgcttctct tcatcgacaa cattttccgt ttcactcagg 480
ctgggttccga agtgtctgcc ctgcttggtc gtatcccatc tgccgtcggg taccaacca 540
ctcttgccgt cgacatgggt ggtatgcagg aacgtattac caccaccaag aagggatcca 600
ttacctcc                                     608

```

<210> 496
 <211> 794
 <212> DNA
 <213> Wangiella dermatitidis strain WSA-229

```

<400> 496
gtttattcaa gaactcattg tgggtggcat tctcataatg tttcggccac aattactgat 60
tgaaaataga acaacattgc aaaggctcat ggtggttact ccgtgttcac tgggtgcggc 120
gagcgaactc gtgagggtaa cgacttgtag cagaaaatgc aggagacctc tggtattcag 180
ctcgatggcg agtccaagggt cgcgctggtg tttggtcaaa tgaacgaacc tcttggtgct 240
cgtgctcggt ttgctctgac tgggtaagtt gttccttcgc ttcttgccgc tatccacatc 300
cccattctga gaatacgtct gccaccatgt catgtgatgt tgggctgggt ctgggtttttg 360
ggaggccctc aagttcaatt tttggatgac agcaccagct ttacaagatt atgctaactt 420
aatggagtct tacgggtggct gagttcttca gggatgagga gggacaggat ggtaagtgtg 480
ataacaatct cgtcgggtgtc aatatcgacg gcgtactctt cgcatacaaa aaccaaagag 540
gtgggtttggt gtgagaagtg cgccggaaat aatggcaacc acgtgacaat gaccacgtgt 600
ggggctcccg tgctaacacg tgacagtctt gctcttcac gacaacattt tccgattcac 660
tcaasccgggt tctgargtgt ctgccttgct tggctgtatt ccatctgccg tcggttacca 720
acccacactc gccgtcgaca tgggtctcat gcaggaacgt atcaccacca cccggaaggg 780
atccatcaca tctg                                     794

```

<210> 497
 <211> 1148
 <212> DNA
 <213> Yarrowia lipolytica ATCC 38295

```

<400> 497
tcttgctcga ggcaccgccg tcgctgacac cgggtgctccc atcactatcc ccgtcggccg 60
aggtaaccctt ggtcgaatca tcaacgtctg tgggtgagccc attgacgagc gaggacccat 120
cgaggcttcc aagtacctcc ccatccacgc tgacccccct accttcgctg agcagtctac 180
ctccgctgag gttctcgaga ccggtattaa ggtcgtcgac ctctcgcgcc cttacgcccg 240
agggtgtaag attggtctct tcggtgggtc cgggtgctggg aagactgtct tcatccagga 300
gctgattaac aacattgcca aggccatgg tggtttctcc gttttctgcg gtgtcgggtg 360
gcgaaccgca gagggtaacg atctttaccg agagatgaag gagactgggt tcatcaacct 420
cgagggtgag tctaagggtc cctcgtctt cggtcagatg aacgagcctc ccggagcccg 480
tgcccgagtc gcccttactg gtctgacctc tgccgagtac ttccgagacg aggaggggtc 540
ggatgtgttg ctcttcgttg acaacatttt ccgattcacc caggccgggt ccgaggtgtc 600
cgctctgctt ggtcgaattc cctcgtgtg cggttaccag ccactctgg ccaccgatat 660
gggtgccctc caggagcgaa ttaccaccac ccagaagggt tccgtcactt ccgtccaggc 720
cgtctacgtg cctgcccgatg atttgaccga tctgtctccc gccaccacct tcgcccactt 780
tgacgccacc accgtcctgt cccgaggtat ttccgagctg ggtatctacc ccgtgtctga 840
tccccctgat tccaagtctc gacttctgga tatcgatgtt gtcggaaagg agcactacga 900
tgttgcttcc aacgtccagc agaccctcca ggcttacaag tctctccagg atatcattgc 960
cattcttggt atggatgagc tgtccgagca ggacaagctg accgtcgagc gagctcgaaa 1020
gatccagcga ttctgtgtct agcccttcac cgtcgccgag gttttcaccg gtattgaggg 1080
acgacttgct tctctcaagg aactgtccg atccttcaag gagatccttg acggtaagca 1140
cgtgctc                                     1148

```

<210> 498
 <211> 966
 <212> DNA
 <213> Aspergillus fumigatus strain WSA-172

```

<400> 498
gcgctattgt cgttggtgct gcctccgacg gtcagatgta ggtggaacat cttgggaaat 60
acgtcgtaaa acacgtcgct tacgttttct cgaataggcc ccagactcgt gagcatttgc 120
tgctcgcccc ccagggttgg gtccagaaga tcgtgtgtct cgtcaacaaa atcgatgcta 180

```


ttgatgatcc	ggagatgctg	gaactgggtcg	aactcgagat	gcgtgagctg	ctgaacagct	240
acggtttctga	gggtgaagag	actccgatca	ttttcggttc	cgctctctgt	gctctcgaag	300
gacgccgtga	cgacatcggt	aaagacagaa	ttgagcagct	tatgaacgct	gtcgacacct	360
ggatccccac	tcctcagcgt	gacctcgaca	aaccttttctt	gatgtctgtc	gaggaagtgt	420
tctctatcgc	cggccgtggt	accgtggctt	ctggtcgtgt	cgagcgtggt	atcttgaaga	480
aggactctga	ggttgagatt	gttggaggtc	ccttcgaacc	caagaagacc	aaagtacccg	540
acattgaaac	cttcaagaag	agctgtgatg	aatcgctgct	tggtgacaac	tctgggtctcc	600
tcctgcgtgg	tatccgacgt	gaagacgtca	agcgtgggtat	ggtcattgct	gttcccggca	660
gcaccaaggc	tcacgacaag	ttcctcgtct	ccatgtacgt	cctgaccgag	gcggaagggtg	720
gtcgtcgtac	tggtctcggg	gccaactacc	gtccccaagt	cttcattccgt	actgcaggta	780
agttccccga	caccgtgtcc	agatcttccg	agagattagc	gatatatgct	aatgattcat	840
cagacgaggg	tgctgacctc	agcttccctg	acggcgacca	atctcgcaga	gttatgcctg	900
gtgacaacgt	cgagatgatc	ctgaagaccc	accaccctgt	tgctgctgag	gctgggtcaac	960
gcttca						966

<210> 499
 <211> 846
 <212> DNA
 <213> *Blastoschizomyces capitatus* ATCC 10663

<400> 499						
tggtgctatt	attgttgttg	ctgcttctga	tggtcaaattg	cccaaacc	gtgagcactt	60
gcttcttgct	cgtaagttg	gtgttaagca	cattgttgtt	ttcgtaaca	agattgatac	120
tattgatgat	cctgaaatgt	tggaacttgt	cgaaatggaa	atgagagaac	ttctttcttc	180
ttacggtttt	gatggcgata	acacccctgt	cattatgggt	tctgctctct	gtgctcttga	240
aggtcgtgaa	ccagaaattg	gtgaacaaag	aatcaaccaa	ctccttgatg	ctatcgatga	300
atacattcct	accccagttc	gtgatattgga	ccaacctttc	ttgatgccac	ttgaagggtg	360
tttctctatt	ccaggctcgtg	gtactgttgc	cactggacgt	gtctatcgtg	gtactttgaa	420
gagagggtgaa	gaagttgaag	ttgttggcta	caatgatgct	ccaatcaaga	ccaccgttac	480
tggtattgaa	atgttcaaga	aggaacttga	tcaagctcaa	gctggtgaca	acgctgggtat	540
tcttttgaga	ggtgttaagc	gtgaagacct	taagcgtggt	atgggtgttg	ctaaaccagg	600
taccgttaag	ccacacacca	agttccttgc	ctccatctat	gttttgacta	aggaagaagg	660
tggcagacac	tctggctttg	gtcttaacta	cagacctcaa	cttttccttg	gttctgctga	720
tggtaccact	gtcttgacct	tcccagaggg	tggtgaccaa	agcactcaag	tcatgccagg	780
tgacaacact	gaaatggttt	gcgaacttgt	tcacccagtt	gctgtcgaac	aaggccaacg	840
tttcaa						846

<210> 500
 <211> 846
 <212> DNA
 <213> *Candida rugosa* ATCC 96275

<400> 500						
ggtgccatta	ttgttgttgc	tgctctctgat	ggacagatgc	cccagaccg	tgagcatctt	60
ttgcttgccc	gccaaagtcg	tatgcaaaag	gtcgttgtgt	ttgttaacaa	gattgatacc	120
attgatgacc	ctgaaatgct	tgatcttgtc	gagatggaga	tgctgaact	ggttgatgaa	180
tatgacttcg	atggagataa	ctctcctgtc	attatgggct	ctgctcttgc	tgctcttgag	240
gacaagaacc	ccgagattgg	taaggaccgt	atcatgcagc	tcttggacgc	tggttgatgaa	300
tggtatcccta	cccccgagcg	tgaccttgac	aagcctttca	tgatgcctat	tgaggcctct	360
ttctccattt	ctggctcgtg	tactgttgcc	actggccgtg	tcgagcgtgg	tattctcaag	420
aagggtgagg	aagtcgagat	cgttggtttc	aacaagcagc	ccctgaaatc	tggtgttact	480
ggtattgaaa	tgttcaagaa	ggaacttgat	caggcccagg	gcggtgataa	tgctgggtatc	540
ttgcttctgt	gtattcgtcg	tgaggacttg	cagcgtggta	tggttttggc	caagcctgga	600
actgttaagg	ctcacaccaa	gttccctttcc	tccatctacg	ttctctccaa	ggaagagggc	660
ggcgcgtcact	ctcctttcgg	tatgaactat	cgtccccaga	tggtcgtttc	tgacgctgat	720
gtcaccggtta	ctcttacttt	ccctgagggg	ggtgaacagc	acactcaggt	cttccctggg	780
gagaacaccg	agatgggttg	cgagctcgtt	caccctactg	ctattgaggt	tggtcaacgc	840
ttcaac						846

<210> 501
 <211> 944
 <212> DNA
 <213> *Coccidioides immitis* strain Silveira

<400> 501
agttgtcgtc gttgctgctt cagacgggtca aatgtatgca accgagagca ctccccggatc 60
ttggttttaa tggcactaat ataagacagg cctcaaaactc gagagcattt acttctcgc 120
cgtcagatcg gtatccaaaa aatcgctcgtc ttcgtgaaca aggttgatgc catcgaggac 180
aaagagatgt tggagcttgt tgaattggag atgctggaac tcctaaccag ctacggtttc 240
gaggggtgaag aaactcccat cattttttggc tctgctctct gtgccctcga aggaagacaa 300
cccagatcg gtgttaccaa gattgatgag ctcttgaggg cgcgcgacac ctggattccc 360
actcctcagc gtgagactga caagcccttc ttgatgtcca ttgaggaagt gttctctatt 420
tccggacgag gaaccgttgt ctccggccgt gtggagcgtg gtatcctcaa gaaggactcc 480
gaagttgaaa ttgtcggcgg ttcgcccag ccaatcaaaa ccaaggttac cgatatcgaa 540
acctttaaga agtcttgcca cgagtctcgc gctgggtgata actcgggctt gctcctacga 600
ggcgtaagc gtgaagatat tagccgtggc atggctcgtc ctgtaccagg aagtgtcaag 660
gcccatactg aattcttagt ttcgctttac gtctcaccg aagctgaggg tgggcgcaaa 720
tctggattca gcagcaagta ccgcccacag atgttcattc gcactgccgg tatgtaatac 780
tgtgataatt tcgttgacat ggtactgatt gaattctata gacgaagcgg ctacagctcag 840
ctggccccga gaagatcaag acaagatggc tatgccagga gacaatatcg aaatgatttg 900
caccaccttg caccagttg ccgcccaggc tggccagcga ttca 944

<210> 502
<211> 849
<212> DNA
<213> *Fusarium oxysporum* strain WSA-212

<400> 502
gctatcatcg tcgttgcgtc ctccgatgga cagatgcccc agacccgtga acacttgctc 60
ctcgctcgtc aggtcgggtg ccagcgaatt gtcgtcttcg tcaacaaggc cgatgccatt 120
gatgaccccg agatgcttga gctcgtcag atggagatgc gcgagcttct taacacctac 180
ggcttcgaag gcgacgacac tcccgtcctc atgggctctg ctcttatgtc tctccagaac 240
cagcgcctcg agattggcac cgagaagatc gatgagctcc ttgctgccgt cgacgagtgg 300
atcccaaccc ccgagcgtga ccttgacaag cccttcctta tgtccgtcga ggatgtcttc 360
tccattgcgg gccgtggtac cgtcgtgtct ggccgtgtgg agcgtggtat tctgaagcgt 420
gatcaggaga tcgagcttgt cggaaagggg caggagggtta tcaagaccaa ggttaccgac 480
attgagacct tcaagaagtc ttgtgagcag tcccaggctg gtgacaactc tggctctctc 540
atccgaggtg ttccgcgtga ggatgtccgc cgtggatagg ttgtctgcgc tccctggacc 600
gtcaagtctc ataccagtt tctcgttcc ctctacgtcc tcaccaagga ggagggtggc 660
cgacacaccc gtttccagga gcaactaccg ccccagctct atctccgaac tgcagatgag 720
tccattgacc tgactttccc cgagggtact gaggatgcct ccagtaagat ggtcatgcct 780
ggtgacaaca ccgagatggt tgtcaccatg ggtcacccca atgccatcga ggttggtcag 840
cgattcaac 849

<210> 503
<211> 1064
<212> DNA
<213> *Histoplasma capsulatum* strain G186A5

<400> 503
tgggtgctatt gtcgttgttg ctgctgctga cggccaaatg taagacgccg cgagggactg 60
ctgaggggttt tatgcttttt aggcccccctt gtttctgaga gcatgatgat actaatattc 120
ggaaacgtat ctattaggcc tcaaacacgt gagcatttgc tccttgcccc acaggctcgg 180
gtccaaaaga tcgtcgtttt cgtgaacaaa gtcgacgccc ttgaggacaa ggagatggtg 240
gagcttgcgt agttagaaat gagagagctc ttaaaccact acggcttcga ggggtgaagag 300
acacccatca tcttttggtt tgccctttgc gccatggaag gccgtgagcc tgagttggga 360
gaaaagaaaa ttgatgaatt gctggaggct gttgatactt ggatccccac accacaacgt 420
gataccgaaa aacctttctt gatgtccgtt gaggaagtat tctctatctc cggccgtgga 480
accgttgccct ccggtcgtgt tgagcgcggg gtcctcaaga aggattcaga agtcgagcta 540
attggggggcg gtcaccaccc catcaggacg aaggtaactg atatcgaaac tttcaagaaa 600
tcctgtgacg agtctagagc tggggacaac tccggtcttt tattgcgtgg tatcaagcgt 660
gaagatatcc gccgtggtat ggtagtggcc gttcctggca gcgtcaaggc ccacgacaag 720
ttcttggtgt cgatgtatgt cctgaccgaa gctgaggggt gtcgccgaac cgatttcggc 780
cagaactatc gtcctcaaat gttcatccgc acagctggta tgtcaaaatg ggaccccttt 840
tcataatcct ttcttttttt ctttttctc tctatctctc tttctgtttc ctttcaactc 900
gcctgattca cgaaattaac taaccggttt gattatagac gaagccgccc atctcagctt 960
ccctagtgga gcagatgaaa gcaaacctgt tatgcctggg gacaacgtcg agatgatcct 1020
ccagacacac cgccccgtgg ctgctgaggc cggccagcga ttca 1064

<210> 504
<211> 982
<212> DNA
<213> *Paracoccidioides brasiliensis* ATCC 32071

<400> 504
tgggtgctatc gtcggttggtg ctgcctctga cggccaaatg tagggatttt gcaagactgg 60
tgaaaaaatc taaagaaaat agaaaagatt gtgctgatgt ttggtatcag gccccaaaca 120
cgcgagcatc tgcttcttgc cagacaagtc ggtgttcaga aaatcgttgt tttcgtcaac 180
aagggtcgatg ctgtagagga taaggagatg ttggagcttg tcgaattgga gatgagagag 240
ctcttgacca cctatgggtt cgagggtgag aagacaccta tcatctttgg ttctgcgctc 300
tgtgctatgg agggccgtca gcccgagttg ggagagcaga aaattgatga attactcgag 360
gctgtggata cttggatccc tacgccacag cgtgatactg acaagccctt cctgatgtcc 420
attgaggagg tgttctctat ctctggacga ggaaccgttg cctccggccg cgttgagcgt 480
ggtatcctca agaaggactc cgaagttgaa attattggcg gcggtgttcc cacaatcctg 540
accaaggtga ctgatatcga aaccttcaag aagtcttgcg acgagtcacg agccgggggac 600
aactccggcc tcttggttgcg cggtgtcaag cgtgaggata tccgccgtgg tatggtcgtt 660
gcagttcccc gaagcgtcaa agcacatgac agattcttgg tgctgatgta cgttctgacc 720
gaggtcgagg gtggtcgccg cactggcttc ggtcagaact atcgctcctca aatgttcac 780
cgcacagctg gtacgttcat tctttcacta tattcctata tgcatagccg gatcctccca 840
ttaactaatt gacacagacg aggtcgctga actcagctgg cctgatggag acgacgaagc 900
caaatgggtc atgcccggtg acaatgttga aatggtcctg aagtcacacc gcccgggggc 960
gctgaggctg gacagcgatt ca 982

<210> 505
<211> 931
<212> DNA
<213> *Penicillium marneffeii* ATCC 58950

<400> 505
cgctgttggt gtcgtcgctg cttctgatgg tcaaatgtaa catatccacg agctgccaat 60
tatggacact gctgataaga ataggcccca aaccggtgag cacttgctcc tcgcccgtca 120
ggtcggtggt caaaagatcg tcgtcttctg caacaagggt gatgccgtcg aggaccccga 180
gatgttgga cttgtcgaat tggaaatgcg tgaactcttg accacctacg gtttcgaggg 240
tgaagagacc cctatcattt tcggatccgc tctttgcgcc ttggaaggcc gcaagcccga 300
gattggcgaa cagaagattg acgagctcat gaacgccgtt gatacctgga tccccacccc 360
ccagcgtgac cttgacaagc ccttcttgat gtccggtgag gaagttttct ccattctctg 420
tcgtggtacc gttgcactcg gtcgtgttga gcgtggtatt ttgcgcaagg attctgaggt 480
tgagattatc ggataccaga agaaccctat caagaccaag gttaccgaca ttgagacctt 540
caagaagtct tgcgatgaat ctctgtctgg tgacaactct ggcttgcttc tccgtggtat 600
caagcgtgag gacattcgtc gtggtatggt tatcgctgct cctggaacca ccaaggctca 660
tgacaacttc ttggtctcca tgtatgtctt gactgaggct gaaggtggtc gtcgtactga 720
attcggcgcc aactaccgct ctcaagcttt catccgtact gccggtatgt tcccttccaa 780
agtcaattaa tgagcgattt gctaaccagt tatagatgag gctgctactc tcagcttccc 840
cggtgacgat cagtccaagc aggtcatgcc cggtgacaac gttgagatga tcttgaagac 900
acaccgtccc gttgccgcgc aagctgggtca g 931

<210> 506
<211> 846
<212> DNA
<213> *Pichia anomala* ATCC 18205

<220>
<221> misc_feature
<222> (481)..(481)
<223> n may be any nucleotide

<400> 506
tggtgctatt attgttggtg ctgcttctga tgggtcaaag cctcaaacca gagaacattt 60
rttattgggt agacaagttg gtgttcaaca cattgttgct tttgttaaca aagttgatac 120
tattgatgac ccagaaatgt tggaaattag tgaaatggaa atgagagaat tgttaagtac 180
ttatgggttt gatgggtgata acgtcccagt tggtatgggt tctgctttat gtgccttgga 240
aggctcgtaa gaagaaattg gtgtcaaagc tattgataaa ttattagctg ctgttgatga 300

atatatccca	acccacaaaa	gagatttaga	aaaaccattc	ttgatgggtg	ttgaagatgt	360
cttytcaatc	tcaggtagag	gtaccgttgt	tactgggtcg	ggtgaacgtg	gtaacttgaa	420
gaaaggtgat	gaagttgaaa	ttgttggttt	aaacaaaact	ccattgaaaa	ctactgtyac	480
nggtattgaa	atgttcaaaa	aagaattgga	ccaagctatg	gctgggtgata	actgtgggtat	540
cttattacgt	ggtatcaaaa	gagatgacat	yaaaagaggt	atgggttattg	ctaaaaccgg	600
taccatctcw	gctcacacta	aattcttagc	ctcaatgtat	attttgacta	aagaagaagg	660
tggtcgtcac	tcagggtttg	gtgaacatta	cagacctcaa	ttattcatca	gaactggtga	720
tgttaccgtt	gttttaacct	tyccagaagg	tggtgattca	tctcaacaaa	tcttaccagg	780
tgacaatgtc	gaaatgggtt	gtgaattggt	tcacccaact	gctttagaag	ctgggtcaaa	840
attcaa						846

<210> 507

<211> 964

<212> DNA

<213> Trichophyton mentagrophytes strain WSA-225

<400> 507

ggagctgttg	tcgttggtgc	agcttctgac	ggtcaaatgt	aattgaatgc	ccgcccagac	60
ggatgaaagg	atthgacgtt	tctaacatca	gtctaggcct	cagaccagag	aacattttgt	120
ccttgccccg	cagggtcggtg	tccagaagct	ggctcgttttc	gttaacaagg	tcgatgccgt	180
tgaggaccca	gagatgttgg	agcttgtcga	acttgaaatg	cgtgaactcc	tcagccacta	240
cagttttgag	ggtgaggaga	cccccatcat	ttttggctct	gctctctgtg	ccctcgagtc	300
ccgtcgacct	gagcttggtg	tcgagaagat	tgacgagcta	ttgaacgccg	tcgacacctg	360
gateccccacc	cccagagcgcg	ccactgataa	gcctttcctc	atgtccattg	aggaagtgtt	420
ctctatctct	ggtcgtggta	ccgtcgtctc	cggtcgtggt	gagcgtggta	tcctcaagaa	480
ggattccgac	gtcgaaattg	ttggtggctc	taccacccct	atcaagacca	aggtcacaga	540
tatcgaaacc	ttcaagaagt	cctgcgatga	atctcgagct	ggtgacaact	ctgggtctcct	600
tctccgaggt	atcaagcgtg	aggacttgaa	gcgtggaatg	ggtgttgctg	cccccggtc	660
caccaaggct	cacaccgact	tcattggtctc	cctctacgtc	ctgactgagg	ctgagggtgg	720
tcgttccaac	ggcttcaccc	acaagtaccg	ccctcaaattg	ttcatccgta	ctgctgggtat	780
gtaaccaaag	tttccgctat	ttactaagta	gatcattgct	aacttgtatt	cccttccgta	840
gacgaagccg	catctttcag	ctggcctgga	gaagaccaag	acaagaaggc	tatgcctggg	900
gacaacgtcg	agatgatttg	caaaaccctc	cacccattg	ctgccgaggc	tggccaacga	960
ttca						964

<210> 508

<211> 844

<212> DNA

<213> Yarrowia lipolytica ATCC 38295

<400> 508

ggtgctatca	ttgtcgttgc	tgctggagac	ggttccaagc	cccagaccgc	agagcatctg	60
ctgcttgctc	gacaggtcgg	tgccagaaac	ctgggttgtgt	ttgttaacaa	ggttgatcag	120
attgatgata	aggagattct	tgagctcggt	gacatggaga	tgcgagatct	gctgaccag	180
tacggttttg	atgggtgacaa	cacccccgtt	gtcatgggct	ctgctctgtg	cgctcttgag	240
ggcaagcaga	aggatatttg	agaggacgcc	atcatggccc	ttatggatgc	cgttgatgag	300
cacatcccta	cccctaaccg	tgaccttgag	aagcccttcc	tgatgccgt	tgaggacgtt	360
ttctccatct	ctggccgagg	aactgttggt	actggccgag	tcgagcgagg	aaacctgaag	420
aaggggtgag	aaatcgagat	tggttggttac	aacaacaagc	ccatcaaggc	tggtgttacc	480
ggtattgaga	tggtcaagaa	ggagctcgag	tccgccatgg	ccggtgacaa	cgccgggtatc	540
ctgctccgag	gtatcaagcg	agacgagatc	aagcgaggta	tggtcatgtg	caagcctggc	600
accgtcaacg	cccacaccaa	gttccttgct	tctctttaca	tcacccccac	cgaggagggt	660
ggtcgaacca	gctctttcgg	cgccaaactac	cgaccccgag	tggtcatccg	aacttcttcc	720
gtcacgcgca	ctctcacctt	ccccgagggt	accgacgagt	cccagaccgt	caaccccggt	780
gacaacactg	agatgggttct	cgagcttggt	caccctaccg	ccattgaggt	caaccagcga	840
ttca						844

<210> 509

<211> 1067

<212> DNA

<213> Babesia bigemina strain Suarez-2

<400> 509

```

cttggacaag ctgaagagcg agcgtgagcg ttgtatcacc attgacatta cctgtggaa 60
gttcgaaact ggcaagtact actacaccgt cattgacgcc cccggtcacc gtgacttcat 120
taagaacatg attacgggta cctcccaggc cgatgttgct atgcttgctg tgccccccga 180
ggctgggtgg ttcgaagctg ccttctctaa ggaaggctcag acccgtgagc acgctctttt 240
ggccttcacc cttgggtgtca agcagatcat ttgcgccatc aacaagatgg acaagtgcga 300
ctacaaggag gaccgttaca gcgaaatcca gaaggaagtt cagggttacc tgaagaaggt 360
cggttacaac atcgagaagg tgcccttcgt cgccatctcc ggtttcatgg gtgacaacat 420
ggttgagcgc tccaccaaca tgccgtggta caagggcaag accttggtcg aggccctcga 480
catgatggag ccccgaaga ggcccgtcga caagcccctg cgtcttcccc tccaggggtg 540
gtacaagatc ggtgggtatcg gtaccgtccc tgcgtgctg gtggagactg gtcagctcaa 600
ggcgggtatg gtcctcacct tcgcccccaa cccgactact actgagtga aatccgtcga 660
aatgcaccac gaagttatcg atgttgccag ccctgggtgac aacgttggtt tcaacgtgaa 720
gaacgtgtcc acctctgaca tccgcactgg tcacgtcgct tctgactcca agaacgacct 780
cgccaaggcc gccgtgtcct tcaccgcccga ggcatcatc ttgaaccacc ctggtaccat 840
caaggccggt tactccccctg ttggttgactg ccacactgcc cacatctcgt gcaaattcga 900
cgagatcacc agccgtatgg acaagcgtac cggtaaggcc cttgaggaga accccaagac 960
catcaagaac ggcgacgccg ctatggtcgt cctgaagccg tgcaagccca tggtcgtcga 1020
ggccttcact gaatacgctc cccttggtcg tttcgccgtg cgtgacg 1067

```

<210> 510
 <211> 1049
 <212> DNA
 <213> Babesia bovis strain Suarez-3

```

<400> 510
gtgaacgtga acgtgggtatt actattgata ttaccttatg gaagttcgag accaccaagt 60
actactacac cgtcattgat gccctgggtc accgtgactt catcaagaac atgattacgg 120
gtactttctca agccgatgtt gctatgcttg ttgtaccagc tgaggctggg ggtttcgagg 180
ccgctttctc caaggaagga cagaccgctg agcacgctct tttggctttc acccttggtg 240
tcaaacagat catctgtgcc attaacaaga tggacaagtg cgactacaag gaggaccgtt 300
acagtgaat ccagaaggaa gtccagggtt acctcaagaa ggtcgggttac aatattgaga 360
aggtgccctt cgttgccatc tccggtttca tgggagacaa catgggtgag cgttccacca 420
acatgccctg gtataaggga aagacattgg tcgaggccct tgatcagatg gaacccccaa 480
agaggcccggt tgacaagcca cttcgtcttc ccctccaggg tgtctacaag atcgggtggt 540
tcgggtaccgt cccggtcggg cgtgttgaaa ctgggtatgtt gaaggctggg atgattctaa 600
cctttgctcc taacccaatc accactgaat gcaaattccgt tgaaatgcac cacgaaaccg 660
ttgaggttgc ttaccccggt gacaacgtcg gtttcaacgt aaagaacgtt tctacttctg 720
acattcgagc ttggtcacgtt gcctctgatt ctaagaacga ccctgccaag gctgctggtt 780
ccttcaactgc ccaggtcatt gtgctcaacc acctgggtac cattaaaggcc ggttactgcc 840
cgtcgtcga ttgccacacc gctcacattt catgtaaatt cgaagagatc accagccgta 900
tggaacagcg taccggtaaa tctcttgagg aaaaccccaa gaccatcaag aacgggtgacg 960
ctgccatggt tgtgctcaag ccaatgaagc ccatgggtgt cgaatccttc actgagtatg 1020
ctcctcttgg tcgtttcgtg gttcgtgac 1049

```

<210> 511
 <211> 1070
 <212> DNA
 <213> Crithidia fasciculata ATCC 11745

```

<400> 511
tggaacagct gaaggcggag cgcgagcgcg gtatcacgat cgatattgcc ctgtggaagt 60
tcgagtcgcc caagtccgtg ttcacgatca tccatgcccc cggccaccgc gacttcatca 120
agaacatgat caccggcacc tcccaggccg atgccgccat tctgatgatt gactcgacct 180
agggtggctt cgaggctggc atctccaagg acggccagac ccgcgagcac gccctgcttg 240
ccttcacgct gggcgtgaag cagatgggtt tgtgctgcaa caagatggac gacaagacgg 300
tgcagtacgc ccaggcccgc tacgaggaga tcagcaagga ggtcggcgcg taccggaagc 360
gcgtgggcta caaccggag aaggtgcgct tcatcccgat ctcggtgctg cagggcgaca 420
acatgatcga gaagtccgac aacatgtcgt ggtacaaggg tcccacgctg ctggaggcgc 480
tcgacctgct ggaggcccc gtgctgcccg tggacaagcc gctgcgctg cccctgcagg 540
acgtgtacaa gatcggcggt atcggcactg tgcccgtggg ccgtgtggag accggcgtga 600
tgaagccggg cgacgttgtg gtgttcgcgc ctgccaacgt gacgaccgag gtgaagtcga 660
tcgagatgca ccacgagcag ctggctgagg ccgtgcccgg cgacaacgtg ggcttcaacg 720
tgaagaacgt gtccgtgaag gatattccgc gtggtaacgt gtgcggcaac acgaagagcg 780
accccccgaa ggaggcggcc gacttcactg ccaggtgat cgtgctgaac cccccgggcc 840

```

```

agatcagcaa cggctacgcg ccggtgctgg actgccacac gagccacatc gcgtgcaagt 900
tcgcggacat cgagtccaag atcgaccgcc gctctggcaa ggagctggag aagagcccgaa 960
aggccatcaa gtccggcgat gcgcccatcg tgaagatgat cccgcagaag ccgatgtgcg 1020
tggaggtggt caacgactac ccgccgctgg gccgcttcgc tgtccgcgat 1070

```

<210> 512
 <211> 1052
 <212> DNA
 <213> *Entamoeba histolytica* strain HM1-IMMS

```

<400> 512
gctgaaagag aaagaggaat tactattgat atttcattat ggaaattcga aacatctaaa 60
tactacttca ctattattga tgccccaggt cayagagatt tcattaagaa catgattact 120
ggaacttcac aagctgatgt tgccatcctt attgttgctg ctggtactgg wgaatttgaa 180
gctgggtatgt caaagaatgg acaaaccaga atggatgcta ttctttcata cactcttgga 240
gttaaacaata tgattgttgg wgttaacaag atggatgcta ttcaatataa acaagaaaga 300
tatgaagaaa ttaagaaaga aattagtgcg ttccttaaga agacwggata taatccagac 360
aagattccat ttgtcccaat ttcaggattc caaggagata atatgattga accatcaacc 420
aacatgccat ggtacaaaagg accaacatta attggagcac ttgattcagt cacaccacca 480
gaaagaccag ttgataaacc acttagactt ccacttcaag atgtttayaa gatttcagggt 540
attggaactg taccatgtgg aagagttgaa actggagttc ttagaccagg aactattggt 600
caattttgcac catcaggagt ttcattctgaa tgtaaattcag ttgaaatgca tcacacagca 660
cttgctcaag ctattccagg tgataatggt ggattcaatg ttagaaaytt aacagttaaa 720
gatattaaga gaggaaatgt agcatcagat gctaagaatc aaccagctgt tggatgtgaa 780
gattttcactg ctcaagtcac tgatcatgaac catccaggac aaattagaaa gggatataca 840
ccagttcttg attgccatac atcacacatt gcatgtaaat tgaagaattt attaagcaag 900
attgatagaa gaacaggtaa atccatggaa ggaggagaa cagaatatat taagaatgga 960
gattcagcac ttgttaagat tgttccaact aaaccacttt gtgttgaaga atttgctaaa 1020
ttcccacat tggaagatt tgctgttaga ga 1052

```

<210> 513
 <211> 1082
 <212> DNA
 <213> *Giardia lamblia* strain Faubert-1

```

<400> 513
gacgagcgcg agcgcgggat caccgatcaac atcgcgctct ggaagttcga gacgaagaag 60
tacatcgcta cgatcatcga cgccccgggc caccgcgact tcatcaagaa catgatcacg 120
gggacgtccc aggcgcagct cgcgatcctc gtcgtcgcgg cgggcccagg cgagttcgag 180
gccgggatct cgaaggacgg ccagacgcgc gagcacgca cccttgcgaa cacgctcggg 240
atcaagacga tgatcatctg cgtcaacaag atggacgac gccaggtcaa gtactcgaag 300
gagcgctacg acgagatcaa gggcgagatg atgaagcagc tcaagaacat cggctggaag 360
aaggccgagg agttcgacta catcccgcag tccggtgga cgggggacaa catcatggag 420
aagtccgaca agatgccctg gtacgagggc ccgtgectga tcgacgcgat cgacgggctc 480
aaggccccga agcgccccgac cgacaagccc ctccgcctcc cgatccagga cgtctacaag 540
atctcgggcg tcgggaccgt ccccgcgggc cgctcgaga cgggagagct cgcgccccgg 600
atgaaggctg tcttcgcccc gacgtcccag gtctcgagg tcaagtcctg cgagatgcac 660
cacgaggagc tcaagaaggc cgggcccggg gacaacgtcg gcttcaacgt ccgcgggctc 720
gccgtcaagg acctcaagaa gggctacgtc gtcggggagc tgacgaacga cccgcccgtc 780
ggctgcaaga gcttcaccgc ccaggtcatc gtcatgaacc acccgaagaa gatccagccc 840
ggctacacgc ccgtcatcga ctgccacacc gcgcacatcg cgtgccagtt ccagctcttc 900
ctccagaagc tcgacaagcg cacgctcaag cccgagatgg agaaccggcc cgacgcaggc 960
cgcgggcgatt gcatcatcgt caagatggtc cccagaagc ccctgtgctg cgagacgttc 1020
aacgactacg cgcccctcgg ccgcttcgac gtccgcgaca tgcgccaac cgttgccgtc 1080
gg 1082

```

<210> 514
 <211> 1098
 <212> DNA
 <213> *Leishmania tropica* ATCC 30816

```

<400> 514
acgcgtgggt gctcgacaag ctgaaggcgg agcgcgagcg cggcatcacg atcgacattg 60

```

cgctgtggaa	gttcgagtcg	cccaagtccg	tgttcacgat	catcgatgcg	cccggccacc	120
gcgacttcat	caagaacatg	atcacgggca	cgtcgcaggc	ggacgccgcc	atcctgatga	180
tcgactcgac	gcatggtggc	ttcgaggctg	gcatctcgaa	ggacggccag	acccgcgagc	240
acgcgctgct	tgccttcaact	cttggcgctga	agcagatggt	ggtgtgctgc	aacaagatgg	300
acgacaagac	ggtgacgtac	gcgcagtcgc	gctacgatga	gatcagcaag	gaggtgggcg	360
cgtacctgaa	gcgcgtgggc	tacaaccccg	agaaggtgcg	cttcattccc	atctcgggct	420
ggcagggcga	caacatgac	gagaagtccg	acaacatgcc	gtggtacaag	gggtcccacg	480
tgctggacgc	gctcgacatg	ctggagccgc	cgggtgcgcc	ggtggacaag	ccgctgcgcc	540
tgccccctgca	ggacgtgtac	aagatcggcg	gtatcgggac	ggtgcccgtg	gggcgcgtgg	600
agaccggcat	catgaagccg	ggcgacgtgg	tgacgttcgc	gcccgcacaac	gtgacgactg	660
aggtgaagtc	gatcgagatg	caccacgagc	agctggcgga	ggcgagccc	ggcgacaacg	720
tcggcttcaa	cgtgaagaac	gtgtcgggtg	aggacatccg	ccgtggtaac	gtgtgcggca	780
actcgaagaa	cgacccgcgc	aaggaggcgc	ccgacttcac	ggcgaggtg	atcgtgctga	840
accaccccg	ccagatcagc	aacggctacg	cgccgggtgct	ggactgccac	acgagccaca	900
ttgcgtgccg	cttcgcggaa	atcgagtcca	agatcgaccg	ccgctccggc	aaggagctgg	960
agaagaaccc	caaggcgatc	aagtctggcg	atgccgcgat	cgtgaagatg	gtgccgcaga	1020
agccgatgtg	cgtggagggtg	ttcaacgact	acgcgcgcgt	gggcccgttt	gccgtgcgcg	1080
acatgcgcca	aaccgttg					1098

<210> 515
 <211> 1104
 <212> DNA
 <213> Leishmania aethiopica ATCC 50119

<400> 515						
tacgcgtggg	tgctcgacaa	gctgaaggcg	gagcgcgagc	gcggcatcac	gatcgacatt	60
gcgctgtgga	agttcgagtc	gcccgaagtc	gtgttcacga	tcacgatgc	gcccggccac	120
cgcgacttca	tcaagaacat	gatcacgggc	acgtcgcagg	cggacgccgc	catcctgatg	180
atcgactcga	cgcattggtg	cttcgaggct	ggcatctcga	aggacggcca	gacccgcgag	240
cacgcgctgc	ttgccttcac	tcttgccgtg	aagcagatgg	tggtgtgctg	caacaagatg	300
gacgacaaga	cggtagcgta	cgcgagtcg	cgctacgagg	agatcagcaa	ggaggtgggc	360
gcgtacctga	agcgcggtgg	ctacaacccg	gagaaggtgc	gcttcattcc	gatctcgggc	420
tgccagggcg	acaacatgat	cgagaagtcg	gacaacatgc	cgtggtacaa	gggtcccacg	480
ctgctggacg	cgctcgacat	gctggagccg	ccggtgcgcc	cggtaggaca	gcccgcgctg	540
ctgcccctgc	aggacgtgta	caagatcgga	ggtagcgga	cggtagccgt	gggcccgcgtg	600
gagaccggca	tcataagacc	gggcgacgtg	gtgacgttcg	cgcccgcaca	cgtgacgact	660
gaggtgaagt	cgatcgagat	gcaccacgag	cagctggcgg	aggcgcagcc	cgccgcacaac	720
gtcggcttca	acgtgaagaa	cgtgtcgggtg	aaggacatcc	gccgtggcaa	cgtgtgcggc	780
aactcgaaga	acgacccgcc	gaaggaggcg	gcccagttca	cggcgaggtg	gatcgtgctg	840
aaccaccccg	gccagatcag	caacgggtac	gcgcgggtgc	tggactgcc	cacgagccac	900
attgcgtgcc	gcttcgcgga	aatcgagtc	aagatcgacc	gccgctccgg	caaggagctg	960
gagaagaacc	ccaaggcgat	caagtctggc	gatgccgcga	tcgtgaagat	ggtgcccgcg	1020
aagccgatgt	gcgtggagggt	gttcaacgac	tacgcgccgc	tgggcccgtt	tgccgtgcgc	1080
gacatgcgcc	aaaccgttgc	cgtc				1104

<210> 516
 <211> 1106
 <212> DNA
 <213> Leishmania tropica ATCC 30815

<400> 516						
tacgcgtggg	tgctcgacaa	gctgaaggcg	gagcgcgagc	gcggcatcac	gatcgacatt	60
gcgctgtgga	agttcgagtc	gcccgaagtc	gtgttcacga	tcacgatgc	gcccggccac	120
cgcgacttca	tcaagaacat	gatcacgggc	acgtcgcagg	cggacgccgc	catcctgatg	180
atcgactcga	cgcattggtg	cttcgaggct	ggcatctcga	aggacggcca	gacccgcgag	240
cacgcgctgc	ttgccttcac	kcttgccgtg	aagcagatgg	tggtgtgctg	caacaagatg	300
gacgacaaga	cggtagcgta	cgcgagtcg	cgctacgatg	agatcagcaa	ggaggtgggc	360
gcgtacctga	agcgcggtgg	ctacaacccg	gagaaggtgc	gcttcattcc	gatctcgggc	420
tgccagggcg	acaacatgat	cgagaagtcg	gacaacatgc	cgtggtacaa	gggtcccacg	480
ctgctggacg	cgctcgacat	gctggagccg	ccggtgcgcc	cggtaggaca	gcccgcgctg	540
ctgccccctgc	aggacgtgta	caagatcggc	ggtatcggga	cggtagccgt	ggggcgcgctg	600
gagaccggca	tcataagacc	gggcgacgtg	gtgacgttcg	cgcccgcaca	cgtgacgact	660
gaggtgaagt	cgatcgagat	gcaccacgag	cagctggcgg	aggcgcagcc	cgccgcacaac	720
gtcggcttca	acgtgaagaa	cgtgtcgggtg	aaggacatcc	gccgtggtaa	cgtgtgcggc	780

```

aactcgaaga acgacccgcc gaaggaggcg gccgacttca cggcgaggt gatcgtgctg 840
aaccaccccg gccagatcag caacggctac gcgcgggtgc tggactgcca cacgagccac 900
attgcgtgcc gcttcgcgga aatcgagtcc aagatcgacc gccgctccgg caaggagctg 960
gagaagaacc ccaaggcgat caagtctggc gatgcccgga tcgtgaagat ggtgccgcag 1020
aagccgatgt gcgtggaggt gttcaacgac tacgcgccgc tgggccgctt tgccgtgcgc 1080
gacatgcgcc aaaccgttgc cgtcgg 1106

```

<210> 517
 <211> 1099
 <212> DNA
 <213> Leishmania donovani ATCC 50212

```

<400> 517
tacgcgtggg tgctcgacaa gctgaaggcg gagcgcgagc gcggcatcac gatcgacatt 60
gcgctgtgga agttcgagtc gcccaagtcc gtgttcacga tcatcgatgc gcccgccac 120
cgcgacttca tcaagaacat gatcacgggc acgtcgcagg cggacgccgc catcctgatg 180
atcgactcga cgcattggtg cttcgaggct ggcattctga aggacggcca gaccgcgag 240
cacgcgctgc ttgccttcac gcttggcggtg aagcagatgg tgggtgtgctg caacaagatg 300
gacgacaaga ccgtgacgta cgcgcagtcg cgctacgatg agatcagcaa ggaggtgggc 360
gcgtacctga agcgcgtggg ctacaacccg gagaagggtgc gcttcattccc gatctcgggc 420
tggcagggcg acaacatgat cgagaggtcg gacaacatgc cgtgggtacaa ggggtccacg 480
ctgctggacg cgctcgacat gctggagccg ccggtgcgcc cgggtggacaa gccgctgcgc 540
ctgcccctgc aggacgtgta caagatcggc ggtatcggga ctgtgcccggt gggccgcgtg 600
gagaccggca tcatgaagcc gggcgacgtg gtgacgttcg cggccgcaa cgtgacgact 660
gaggtgaagt cgatcgagat gcaccacgag cagctggcggt aggcgcagcc cggcgacaac 720
gtcggcttca acgtgaagaa cgtgtcgggt aaggacatcc gccgtggcaa cgtgtgcggc 780
aactcgaaga acgacccgcc gaaggaggcg gccgacttca cggcgaggt gatcgtgctg 840
aaccaccccg gccagatcag caacggctac gcgcgggtgc tggactgcca cacgagccac 900
attgcgtgcc gcttcgcgga aatcgagtcc aagatcgacc gccgctccgg caaggagctg 960
gagaagaacc ccaaggcgat caagtctggc gatgcccgga tcgtgaagat ggtgccgcag 1020
aagccgatgt gcgtggaggt gttcaacgac tacgcgccgc tgggccgctt tgccgtgcgc 1080
gacatgcgcc aaaccgttgc 1099

```

<210> 518
 <211> 1098
 <212> DNA
 <213> Leishmania infantum strain MOU

```

<400> 518
tacgcgtggg tgctcgacaa gctgaaggcg gagcgcgagc gcggcatcac gatcgacatt 60
gcgctgtgga agttcgagtc gcccaagtcc gtgttcacga tcatcgatgc gcccgccac 120
cgcgacttca tcaagaacat gatcacgggc acgtcgcagg cggacgccgc catcctgatg 180
atcgactcga cgcattggtg cttcgaggct ggcattctga aggacggcca gaccgcgag 240
cacgcgctgc ttgccttcac gcttggcggtg aagcagatgg tgggtgtgctg caacaagatg 300
gacgacaaga ccgtgacgta cgcgcagtcg cgctacgatg agatcagcaa ggaggtgggc 360
gcgtacctga agcgcgtggg ctacaacccg gagaagggtgc gcttcattccc gatctcgggc 420
tggcagggcg acaacatgat cgagaggtcg gacaacatgc cgtgggtacaa ggggtccacg 480
ctgctggacg cgctcgacat gctggagccg ccggtgcgcc cgggtggacaa gccgctgcgc 540
ctgcccctgc aggacgtgta caagatcggc ggtatcggga ctgtgcccggt gggccgcgtg 600
gagaccggca tcatgaagcc gggcgacgtg gtgacgttcg cggccgcaa cgtgacgact 660
gaggtgaagt cgatcgagat gcaccacgag cagctggcggt aggcgcagcc cggcgacaac 720
gtcggcttca acgtgaagaa cgtgtcgggt aaggacatcc gccgtggcaa cgtgtgcggc 780
aactcgaaga acgacccgcc gaaggaggcg gccgacttca cggcgaggt gatcgtgctg 840
aaccaccccg gccagatcag caacggctac gcgcgggtgc tggactgcca cacgagccac 900
attgcgtgcc gcttcgcgga aatcgagtcc aagatcgacc gccgctccgg caaggagctg 960
gagaagaacc ccaaggcgat caagtctggc gatgcccgga tcgtgaagat ggtgccgcag 1020
aagccgatgt gcgtggaggt gttcaacgac tacgcgccgc tgggccgctt tgccgtgcgc 1080
gacatgcgcc aaaccgttgc 1098

```

<210> 519
 <211> 1071
 <212> DNA
 <213> Leishmania enriettii ATCC 50120

<400> 519
ctcgacaagc tgaaggcgga ggcgcgagcgc ggcacacga tcgacattgc gctgtggaag 60
ttcagatcgc ccaagtctgt gttcacgata atcgatgcgc ccggccaccg cgacttcac 120
aagaacatga tcaccggcac gtcgcaggcc gacgccgcca tcctgatgat cgactcgacc 180
cagggcggtc tcgaggctgg catctcgaag gacggccaga cccgcgagca cgcgctgctc 240
gccttcacgc ttggtgtgaa gcagatgggtg gtgtgctgca acaagatgga cgacaagacg 300
gtgcagtact cgcaggcgcg ctacgaggag atcagcaagg aggtgggccc gtacctgaag 360
cgcgtcggct acaaccggga gaagggtgcgc ttcacccga tctcgggctg gcaggggcgac 420
aacatgatcg acaagtcgga cagcatgccg ttgtacaagg ggcccacgct gctggacgcg 480
ctcgacatgc tggaggcgcc ggtgcgcccg gtggacaagc cgtgcgcct gccctgcag 540
gacgtgtaca agatcggcg gtcgggacg gtgcccgtgg gccgcgtgga gaccggcatc 600
atgaagcctg gcgacgtggt gacgtttgcg ccgcgaacg tgacgacgga ggtgaagtcg 660
atcgagatgc accacgagca gctggcgagg gcgggtgccc gcgacaacgt cggcttcaac 720
gtgaagaacg tgtcgggtgaa ggacatccgc cgtggtaacg tgtgcggcaa ctcgaagaac 780
gacccgccga aggaggcggc cgacttcacg gcgcagggtga tcgtgctgaa ccaccctggc 840
cagatcagca acggctacgc gccgggtgctg gactgccaca cgagccacat cgcgtgccgc 900
ttcgcggata tcgagtccaa gatcgaccgc cgctctggga aggagctgga gaagaacccc 960
aaggcgatca agtcggcgca tgcggccatc gtgaagatgg tgccgcagaa gccgatgtgc 1020
gtggagggtgt tcaacgacta cccgcgcgtg gggcgcttcg ctgtgcgcga c 1071

<210> 520
<211> 1071
<212> DNA
<213> Leishmania gerbilli ATCC 50121

<400> 520
ctcgacaagc tgaaggcgga ggcgcgagcgc ggcacacga tcgacattgc gctgtggaag 60
ttcagatcgc ccaagtccgt gttcacgata atcgatgcgc ccggccaccg cgacttcac 120
aagaacatga tcaccggcac gtcgcaggcg gacgccgcca tcctgatgat cgactcgacc 180
catggtggct tcgaggctgg catctcgaag gacggccaga cccgcgagca cgcgctgctt 240
gccttcactc ttggcgtgaa gcagatgggtg gtgtgctgca acaagatgga cgacaagacg 300
gtgacgtacg cgcagtcgcg ctacgatgag atcagcaagg aggtgggccc gtacctgaag 360
cgcgtgggct acaaccggga gaagggtgcgc ttcacccga tctcgggctg gcaggggcgac 420
aacatgatcg agaagtcgga caacatgccg ttgtacaagg gtcccacgct gctggacgcg 480
ctcgacatgc tggagccgcc ggtgcgcccg gtggacaagc cgctgcgcct gccctgcag 540
gacgtgtaca agatcggcg gtcgggacg gtgcccgtgg gccgcgtgga gaccggcatc 600
atgaagccgg gcgacgtggt gacgttcgcg ccgcgaacg tgacgactga ggtgaagtcg 660
atcgagatgc accacgagca gctggcgagg gcgcagcccg gcgacaacgt cggcttcaac 720
gtgaagaacg tgtcgggtgaa ggacatccgc cgtggtaacg tgtgcggcaa ctcgaagaac 780
gacccgccga aggaggcggc cgacttcacg gcgcagggtga tcgtgctgaa ccaccccgcc 840
cagatcagca acggctatgc gccgggtgctg gactgccaca cgagccacat tgcgtgccgc 900
ttcgcggaaa tcgagtccaa gatcgaccgc cgctccggca aggagctgga gaagaacccc 960
aaggcgatca agtctggcga tgcgcgcgac gtgaagatgg tgccgcagaa gccgatgtgc 1020
gtggagggtgt tcaacgacta cgcgcgcgtg ggccgctttg ccgtgcgcga c 1071

<210> 521
<211> 1114
<212> DNA
<213> Leishmania hertigi ATCC 50125

<400> 521
tcgttcaagt acgcgtgggt gctcgacaag ctgaaggcgg agcgcgagcg cggatatcacg 60
atcgacattg cgctgtggaa gttcagatcg cccaagtccg tgttcacgat catcgatgcg 120
cccggccacc gcgacttcac caagaacatg atcaccggca cgtcgcaggc ggatgctgcc 180
attctgatga tcgattcgac gcagggtggc ttcgaggctg gcatctcgaa ggacggccag 240
acgcgcgagc acgcgctgct ggccttcacg ctgggctgta agcagatggt tgtgtgctgc 300
aacaagatgg acgacaagac ggtgcagtac gcgcaggcgc gctacgagga gatcagcaag 360
gaggtgggct cgtacctgaa gcgcgtggcg acaaccgg agaagggtgcg cttcatcccc 420
atctcgggct ggcaggggcg caacatgatc gagaagtccg acaacatgct gtggtacaag 480
ggtcccacgc tgcgtggagg gctggacatg ctggaggcgc cgggtgcgccc ggtggacaag 540
ccgctgcgcc tgcccctgca ggacgtgtac aagatcggcg gcattggcac ggtgccggtg 600
ggcgtgctgg agaccggcat catgaagccc ggcgacgtgg tgacgttcgc gcccgccaac 660
gtgacgacgc aggtgaagtc gatcgagatg caccacgagc agctgcagga ggctgtgccc 720
ggcgacaacg tcggcttcaa cgtgaagaac gtgtcgggtga aggacatccg ccgtggtaac 780

gtgtgtggca	actcgaagaa	cgaccgcg	aaggaggcgg	ctgacttcac	ggcgcaggtg	840
atcgtgtgta	accaccccg	ccagatcagc	aacgggtacg	cgccgggtgt	ggactgccac	900
accagccaca	tcgctgtg	cttcgcggac	atcgagtcga	agatcgaccg	ccgctccggc	960
aaggagctgg	agaagaaccc	caagtccatc	aagtccggcg	acgccgccat	cgtgaagatg	1020
gtgccgcaga	agccgatgtg	cgtggagggtg	ttcaacgact	acccgccgct	gggccgcttt	1080
gcgggtgcgcg	acatgcgcca	aaccgttgcc	gtcgc			1114

<210> 522
 <211> 1106
 <212> DNA
 <213> Leishmania major ATCC 50122

<400> 522	tacgcgtggg	tgctcgacaa	gctgaaggcg	gagcgcgagc	gcggcatcac	gatcgacatt	60
	gcgctgtgga	agttcgagtc	gcccgaagtcc	gtgttcacga	tcatcgatgc	gcccggccac	120
	cgcgacttca	tcaagaacat	gatcacgggc	acgtcgcagg	cggacgcggc	cattctgatg	180
	atcgactcga	cgcattggcg	cttcgaggct	ggcatctcga	aggacggcca	gacccgcgag	240
	cacgcgctgc	ttgccttcac	tcttggcgtg	aagcagatgg	tggtgtgctg	caacaagatg	300
	gacgacaaga	cgggtgacgta	cgcgcagtc	cgctacgatg	agatcagcaa	ggagggtggg	360
	gcgtacctga	agcgcgtggg	ctacaacccg	gagaagggtgc	gcttcatccc	gatctcgggc	420
	tggcagggcg	acaacatgat	cgagaagtgc	gacaacatgc	cgtgggtacaa	gggtcccacg	480
	ctgctggacg	cgtcgacat	gctggagccg	ccgggtgcgc	cgggtggacaa	gccgctgcgc	540
	ctgccccctgc	aggacgtgta	caagatcggc	ggtatcggga	cgggtgcccgt	gggccgcgctg	600
	gagaccggca	tcataagacc	gggacgagtc	gtgacgttcg	cggccgcca	cgtgacgact	660
	gaggtgaagt	cgatcgagat	gcaccacgag	cagctggcgg	aggcgcagcc	cggcgacaac	720
	gtcggcttca	acgtgaagaa	cgtgtcgggtg	aaggacatcc	gccgtggtaa	cgtgtgcggc	780
	aactcgaaga	acgacccgcc	gaaggaggcg	gccgacttca	cggcgcaggt	gatcgtgctg	840
	aaccaccccg	gccagatcag	caacggctat	gcgcgggtgc	tggactgcca	cacgagccac	900
	attgcgtgcc	gcttcgcgga	aatcgagtcc	aagatcgacc	gccgctccgg	caaggagctg	960
	gagaagaacc	ccaaggcgat	caagtctggc	gatgcgcgca	tcgtgaagat	ggtgccgcag	1020
	aagccgatgt	gcgtggaggt	gttcaacgac	tacgcgcgcg	tgggccgctt	tgccgtgcgc	1080
	gacatgcgcc	aaaccgttgc	cgtcgg				1106

<210> 523
 <211> 1105
 <212> DNA
 <213> Leishmania amazonensis ATCC 50131

<400> 523	tacgcgtggg	tgctcgacaa	gctgaaggcg	gagcgcgagc	gcggcatcac	gatcgacatt	60
	gcgctgtgga	agttcgagtc	gcccgaagtcc	gtgttcacga	tcatcgatgc	gcccggccac	120
	cgcgacttca	tcaagaacat	gatcacgggc	acgtcgcagg	cggacgcggc	catcctgatg	180
	atcgactcga	cgcattggcg	cttcgaggct	ggcatctcga	aggacggcca	gacccgcgag	240
	cacgcgctgc	ttgccttcac	tcttggcgtg	aagcagatgg	tggtgtgctg	caacaagatg	300
	gacgacaaga	cgggtgatgta	cgcgcagtcg	cgctacgatg	agatcagcaa	ggagggtgagc	360
	gcgtacctga	agcgcgtggg	ctacaacccg	gagaagggtgc	gcttcatccc	gatctcgggc	420
	tggcagggcg	acaacatgat	cgacaagtgc	gacaacatgc	cgtgggtacaa	gggtcccacg	480
	ctgctggacg	cgtcgacat	gctggagccg	ccgggtgcgc	cgggtggacaa	gccgctgcgc	540
	ctgccccctgc	aggacgtgta	caagatcggc	ggtatcggga	cgggtgcccgt	gggccgcgctg	600
	gagaccggga	tcataagacc	gggacgagtc	gtgacgttcg	cggccgcca	cgtgacgact	660
	gaggtgaagt	cgatcgagat	gcaccacgag	cagctggcgg	aggcgcagcc	cggcgacaac	720
	gtcggcttca	acgtgaagaa	cgtgtcgggtg	aaggacatcc	gccgtggtaa	cgtgtgcggc	780
	aactcgaaga	acgacccgcc	gaaggaggcg	gccgacttca	cggcgcaggt	gatcgtgctg	840
	aaccaccccg	gccagatcag	caacggctac	gcgcgggtgc	tggactgcca	cacgagccac	900
	atcgcggtgcc	gcttcgcgga	gatcgagtcc	aagatcgacc	gccgctccgg	caaggagctg	960
	gagaagaacc	ccaaggcgat	caagtctggc	gacgcgcgca	tcgtgaagat	ggtgccgcag	1020
	aagccgatgt	gcgtggaggt	gttcaacgac	tacgcgcgcg	tgggccgctt	tgccgtgcgc	1080
	gacatgcgcc	aaaccgttgc	cgtcgg				1105

<210> 524
 <211> 1098
 <212> DNA
 <213> Leishmania mexicana ATCC 50156

<400> 524

tacgcgtggg	tgctcgacaa	gctgaaggcg	gagcgcgagc	gcggcatcac	gatcgacatt	60
gcgctgtgga	agttcagagtc	gccgaagtcc	gtgttcacga	tcacgatgc	gcccggccac	120
cgcgacttca	tcaagaacat	gatcacgggc	acgtcgcagg	cggacgcggc	catcctgatg	180
atcgactcga	cgcattggtg	cttcgaggct	ggcatctcga	aggacggcca	gacccgcgag	240
cacgcgtgc	ttgccttcac	tcttggcgtg	aagcagatgg	tggtgtgctg	caacaagatg	300
gacgacaaga	cggatgatgta	cgcgcatgctg	cgctacgatg	agatcagcaa	ggaggtgagc	360
gcgtacctga	agcgcgtggg	ctacaacccg	gagaagggtgc	gcttcatccc	gatctcgggg	420
tggcagggcg	acaacatgat	cgacaagtgc	gacaacatgc	cgtggtacaa	gggtcccacg	480
ctgctggacg	cgctcgacat	gctggagccg	ccggtgcgcc	cgggtggacaa	gccgctgcgc	540
ctgcccctgc	aggacgtgta	caagatcggc	ggtatcggga	cggtgcccgt	gggcgcgtg	600
gagaccggga	tcatagaagcc	gggcgacgtg	gtgacgttcg	cggccgcca	cgtgacgact	660
gaggtgaagt	cgatcgagat	gcaccacgag	cagctggcgg	aggcgcagcc	cggcgacaac	720
gtcggcttca	acgtgaagaa	cgtgtcgggtg	aaggacatcc	gccgtggtaa	cgtgtgcggc	780
aactcgaaga	acgacccgcc	gaaggaggcg	gccgacttca	cggcgcaggt	gatcgtgctg	840
aaccaccccg	gccagatcag	caacggctac	gcgcgggtgc	tggactgcca	cacgagccac	900
atcgcggtgc	gcttcgcgga	gatcgagtcc	aagatcgacc	gccgctccgg	caaggagctg	960
gagaagaacc	ccaaggcgat	caagtctggc	gacgcgcgca	tcgtgaagat	ggtgccgcag	1020
aagccgatgt	gcgtggaggt	gttcaacgac	tacgcgcgcg	tgggcccgtt	tgccgtgcgc	1080
gacatgcgcc	aaaccgtt					1098

<210> 525

<211> 1081

<212> DNA

<213> Leishmania tarentolae strain II WT

<400> 525

gctgaaggcg	gagcgcgagc	gcggcatcac	gatcgacatt	gcgctgtgga	agttcagagtc	60
gcccgaagtcg	gtgttcacga	tcacgatgc	gcccggccac	cgcgacttca	tcaagaacat	120
gatcacgggc	acgtcgcagg	cggacgcggc	catcctgatg	atcgactcga	cgcacgggtg	180
gttcgaggct	ggcatctcga	aggacgggca	gacgcgcgag	cacgcgctgc	ttgccttcac	240
tcttggcgtg	aagcagatgg	ttgtgtgctg	caacaagatg	gacgacaaga	cggatgatgta	300
cgcgcatgctg	cgctacgatg	agatcagcaa	ggaggtgggc	gcgtacctga	agcgcgtggg	360
ctacaacccg	gagaagggtgc	gcttcatccc	gatctcgggc	tggcagggcg	acaacatgat	420
cgagaagtgc	gacaacatgc	cgtggtacaa	gggtcccacg	ctgctggacg	cgctcgacat	480
gctggaggcg	ccggtgcgcc	cgggtggacaa	gccgctgcgc	ctgcccctgc	aggacgtgta	540
caagatcggc	ggcatcggca	cggtgcccgt	gggcgcgtg	gagaccggca	tcatagaagcc	600
gggcgacgtg	gtgacgttcg	cgcccgcgaa	cgtgacgacg	gaggtgaagt	cgatcgagat	660
gcaccacgag	cagctggcgg	aggcgcagcc	gtcggcttca	acgtgaagaa	gacgacacac	720
cgtgtcgggtg	aaggacatcc	gccgtgggaa	cgtgtgcggg	aactcgaaga	acgacccgcc	780
gaaggaggcc	gccgacttca	cggcgcaggt	gatcgtgctg	aaccaccccg	gccagatcag	840
caacggctac	gcgcgggtgc	tggactgcca	cacgagccac	atcgcggtgc	ggttcgcgga	900
catcgactcc	aagattgacc	gccgctccgg	caaggagctg	gagaagaacc	ccaaggcgat	960
caagtcgggc	gatgccgcga	tcgtgaagat	aagccgatgt	gcgtggagat		1020
gttcaacgac	tacgcgcgcg	ttggcccgtt	tgctgtgcgc	gacatgcgcc	aaaccgttgc	1080
c						1081

<210> 526

<211> 1102

<212> DNA

<213> Leishmania tropica ATCC 50129

<400> 526

aaatacgcgt	gggtgctcga	caagctgaag	gcggagcgcg	agcgcggcat	cacgatcgac	60
attgcgctgt	ggaagtccga	gtcgcccaag	tccgtgttca	cgatcatcga	tgcgcccggc	120
caccgcgact	tcatacaaga	catgatcacg	ggcacgtcgc	aggcggacgc	cgccatcctg	180
atgatcgact	cgacgcattg	tggcttcgag	gttgccatct	cgaaggacgg	ccagaccgc	240
gagcacgcgc	tgcttgccct	cackcttggc	gtgaagcaga	tggtggtgtg	ctgcaacaag	300
atggacgaca	agacggtgac	gtacgcgcag	tcgcgctacg	atgagatcag	caaggaggtg	360
ggcgcgtacc	tgaagcgcgt	gggctacaac	ccggagaagg	tgcgcttcat	cccgatctcg	420
ggctggcagg	gcgacaacat	gatcgagaag	tcggacaaca	tggcgtggtg	caagggtccc	480
acgctgctgg	acgcgctcga	catgtgggag	ccgcgggtgc	gcccgggtgga	caagccgctg	540
cgctgcccc	tgcaggacgt	gtacaagatc	ggcgggtatcg	ggacgggtgc	cgtggggcgc	600
gtggagaccg	gcacatgaa	gccgggacgac	gtggtgacgt	tcgcgcccgc	caacgtgacg	660

```
actgaggtga agtcgatcga gatgcaccac gaggagctgg cggaggcgca gcccggcgac 720
aacgtcggct tcaacgtgaa gaacgtgtcg gtgaaggaca tccgccgtgg taacgtgtgc 780
ggcaactcga agaacgaccc gccgaaggag ggggccgact tcacggcgca ggtgatcgtg 840
ctgaaccacc ccggccagat cagcaacggc tacgcgccgg tgctggactg ccacacgagc 900
cacattgcgt gccgcttcgc ggaaatcgag tccaagatcg accgccgctc cggcaaggag 960
ctggagaaga accccaaggc gatcaagtct ggcgatgccg cgatcgtgaa gatggtgccg 1020
cagaagccga tgtgcgtgga ggtgttcaac gactacgcgc cgctggggccg ctttgccgtg 1080
cgcgacatgc gccaaaccgt tg 1102
```

```
<210> 527
<211> 1105
<212> DNA
<213> Neospora caninum strain Suarez-4
```

```
<220>
<221> misc_feature
<222> (236)..(236)
<223> n represents any nucleotide
```

```
<220>
<221> misc_feature
<222> (353)..(353)
<223> n represents any nucleotide
```

```
<220>
<221> misc_feature
<222> (386)..(386)
<223> n represents any nucleotide
```

```
<220>
<221> misc_feature
<222> (402)..(402)
<223> n represents any nucleotide
```

```
<220>
<221> misc_feature
<222> (430)..(430)
<223> n represents any nucleotide
```

```
<400> 527
ggacraactt aaagctgaac gtgagcgtgg tatcaccatt gatattctcc tgtggaaatt 60
tgagaccagc aagtactatg ttaccatcat tgatgcccc ggacacagag acttcatcaa 120
aaacatgatt acaggcacat cccaggctga ctgtgctgtc ctgattgttg ctgctgggtg 180
tgggtgaattt gaagccggta tctccaagaa cgggcagacc cgtgagcatg cccttntggc 240
ttacaccctg ggtgtgaaac aactaattgt tggcgtaaac aaaakggatt ccactgagcc 300
accctatagc caraagagat acgargaaat tgttaaggaa gtcagcmcc tntntaaaaa 360
aattggytac aaccccgaca cagtancatt tgkgccaatt tntggctgga atggtgacaa 420
catgctggan ccaagtgtga atatgccatg gttcaaggga tggaaagtc cccgtaagga 480
cggcaatgcc agkgaaccm ccctgcttga agctytggat tgcattytgc caccaayttg 540
cccaactgac aaacccttgc gtttgccyt ccaggatgtc tataaaattg gkggtattgg 600
tactgtccct gtgggtcgtg tggagactgg tgttctcaa cctggcatgg tgggtacatt 660
tgctccagtc aatgtaacaa ctgaagtga gtctgttaga atgcaccatg aagcattgag 720
tgaagccctt cctggggaca atgtgggctt caatgtcaag aacgtgtctg tcaaagatgt 780
ccgtcgtggc aatgtggctg gtgacagcaa aaatgatcca cccatggaag ctgctggctt 840
cacagctcag gtgattattt tgaaccatcc aggccaaatc agtgctggat atgcacctgt 900
gctggattgt cacacagctc acattgcttg caagtttgct gagctgaagg agaagattga 960
tcgtcgttct gggaaaaagc tggaaagatg ccctaaattc ttgaaatctg gtgacgctgc 1020
catcgttgat atggttctct gcaagcccat gtgtgtcgag agcttctctg attatcctcc 1080
cctgggcccgt tttgctgtgc gtgac 1105
```

```
<210> 528
<211> 935
<212> DNA
<213> Trichomonas vaginalis ATCC 30001
```

```

<400> 528
gcacatccca ggctgatgct gctatccttg tcatcgactc cacactcggg ggyttcgaag 60
ccggtatcgc tgaacaaggc cagacacgtg aacacgctct tcttgccctc acactcggca 120
tcaagcaggt cattgtcgcc gtcaacaaga tggatgacaa gacagtcaac tacaacaagg 180
cycgttttcga cgaaatcaca gccgaaatga cagcgcaccc tacaggcatc gggtacaagc 240
cagaaatggt ccgcttcgtc ccaatctccg gctgggctgg cgacaacatg acagagaagt 300
ctccaaacat gccatggtac aatggcccat accttcttga agccctcgat tcccttcagc 360
caccaaagcg cccattcgac aagccactcc gtcttccact ccaggatgtc tacaagatca 420
acgggtatcgg tacagttcca gtccggccgtg tcgaatccgg cacaatgaag ccaggcatga 480
tcgttaactt cgcgccatcc acagttacag ctgaagttaa gtccatcgaa atgcaccacg 540
aatcccttcc agaggctctt ccaggtgaca acatcggctt caacgtcaag aacgtttcca 600
cagctgatgt caagcgtggc tacgtcgttg gtgatacaaa gcgtgaccca ccagtcgaat 660
gcgcttccct cacagctcar atgatcatct ccaaccaccc aggcaagatc cagcccggt 720
accagccagt tttecgactgc cacacagctc acatcgccct caagttcgac aagctcatcc 780
agcgtatcga tcgtcgccac ggcaagaagg ctacagagaa cccagaatac attcagaagg 840
atgatgccgc tatcgtcgag gttgtcccat ccaagccact cgctcgctgag tccttcacag 900
agtaccaccc actcggccgt ttcgccatcc gtgat 935

```

<210> 529

<211> 1065

<212> DNA

<213> Trypanosoma brucei subsp. brucei strain EATRO795

```

<400> 529
aagctgaagg ctgagcgcga acgtgggtatc acgatcgaca ttgcactgtg gaaattcgag 60
tcacccaagt ctgtcttcac tattattgat gctcctgggc accgtgactt catcaagaac 120
atgatcaccg gcacatcgca agccgacgca gccatcctca tcattgcctc tgcgcagggg 180
gagttcgagg ctggtatctc caaggatgga cagaccccg agcacgcgtt gctggccttc 240
actttgggtg tgaagcagat ggttgtgtgc tgcaacaaga tggacgacaa gactgtgaac 300
tacggacagg agcggtatga cgagattgtg aaggaggtgt ctgcttacat caagaagggt 360
gggtacaacg tggagaaggc gcgcttcgtc cccatctccg gatggcaggg cgacaacatg 420
attgagaaat ccgagaagat gccatggtac aagggtccaa cgctcctgga ggactagac 480
atgctggagc caccagtgcg tccgagcgac aagccctgc gtctgccact gcaggacgtg 540
tacaagatcg gtggtattgg caccgtgccc gttggtcggt tggagaccgg cgtgatgaag 600
cctggtgatg tggtgacgtt tgccccgcgc aacgtgacga ccgaggtgaa atcgatcgag 660
atgcaccacg agcagctcgc tgaggcgacc cccggtgaca acgtcggctt taacgtgaag 720
aacgtttctg taaaggacat ccgcccgtgg aacgtctgcg gtaacaccaa gaacgacccc 780
ccaaaggagg ccgcccactt caccggcacag gtgatcatcc tgaaccaccc cggacagatt 840
ggaacgggtt atgcgccgt gctggactgc cacacatcgc acattgcctg caagttcgag 900
gagatcgagt cgaagatcga ccgtcgctct ggcaaggagc tggagaaggc tcccaagtcg 960
atcaagtctg gcgacgccgc gatcgtgcgc atgggtgccg agaagcctat gtgcgtggag 1020
gtcttcaacg actacgcgc actcggccgc tttgccgtgc gtgac 1065

```

<210> 530

<211> 1297

<212> DNA

<213> Crithidia fasciculata ATCC 11745

```

<400> 530
ttcgcggagg gcgtgccgc ggtgctgacg gcgtggacg tgacggagga cctcggccgc 60
gacgagccgc tgacgtgga gattgtgcag caattggacg cgaacaccgg ccgctgcatt 120
gccatgcaga cgacggatct gctgaagctg aagtcgaagg ttgtgtcgac gggcggcaac 180
atctccgtgc cgggtggccg cgagacgctg ggccgcaccc tcaacgtgct cggcgacgcg 240
atcgaccagc gcggtgtggt gggcgagaag atgcgcacgc cgatccacgc cgaggcgccg 300
aagctggcgg accaggccgc ggaggacgcg attctgacga ccggcatcaa ggtgatcgac 360
ctgattctgc cgtactgcaa ggggtggcag atcgggctgt tcggcgggtg tgggtgtggc 420
aagactgtga tcatcatgga gctgatcaac aacgtggcca agggccacgg tgggtttctc 480
gtgttcgcgc gcgttggcga gcgcacccgc gagggcacgg atctgtacct ggagatgatg 540
cagtcgaagg tcattgacct gaagggcgag tcgaagtgcg tgctggtgta cggccagatg 600
aacgagcccc cgggtgcgcg tgccgctggt cgcagctctg cgctgacgat ggcggagtac 660
ttccgtgacg tggagggcca gaacgtgctg gtgttcatcg acaacatctt ccgcttcacc 720
caggccaact ccgaggtgtc cgccctgctg ggccgcattc ccgccgccgt gggctaccag 780
ccgacgcttg ccgaggatct tggtatgctg caggagcgca ttacgtcgac gacgaagggc 840
tcgattacgt ctgtgcaggc cgtgtacgtg ccggccgatg atatcacgga tccggcgccg 900

```

```

gcgacgacct tctcgcacct ggatgcgacg acggtgctgg accgcgcgggt tgccgagtct 960
ggcatctacc ccgccgtgaa cccgctggag tgcgcgtcgc gtatcatgga ccccgatgtg 1020
atcgacgtgg accactacaa cgttgccgag gatatcgtgc agatgctgac caagtacaag 1080
gagctgcagg atatcattgc cgtgctgggt atcgacgagc tgagcggagga ggacaagctt 1140
gtgggtggacc gcgctcgcaa ggtgacgcgc ttctgtcgc agccgttcca ggtggccgag 1200
gtgttcaccg gcatgacggg ccactacgtg cagctggagg acacagtgga gtcgtttctt 1260
ggcctgctga tgggctcgta cgaccagatc ccggaga 1297

```

<210> 531
 <211> 1298
 <212> DNA
 <213> *Leishmania tropica* ATCC 30816

```

<400> 531
cttctcggag ggcgtgccc cctgctgac ggcgtggat gtgacggagg accttggccg 60
cgatgagccg ctgacgtgg agatcgtgca gcacttggac gcgaacacgg gccgctgcat 120
tgcatgacg acgacggacc tgctgaagct gaagtcgaag gtcgtgtcga ccggcggcaa 180
catctctgtg ccggtgggccc gtgagacgct gggccgcac ttcaaygttc tgggcgacgc 240
gatcgaccag cgggcccccg tgggcgagaa gatgcgcac gcatccacg ccgaggcccc 300
gaagctggcg gatcaggccc cggaggacac gatcctgacg accggcatca aggtgatcga 360
cctgattctg ccctactgca aggttggcaa gatcgccctg ttccggcgggt ccggtgtggg 420
caagactgtg atcatcatgg agctgatcaa caacgtcgcg aaggggccacg gcggtttctc 480
cgtgtttgcc ggcgttggcg agcgcacgcg cgagggcacg gacctgtacc tggagatgat 540
gcagtgaag gtgattgacc tgaagggcga gtcgaagtgy gtgcttgtgt atgggcagat 600
gaacgagccc ccgggtgcgc gcgcgcgcgt tgcgcagctc gcgctgacga tggcggagta 660
cttcgcgac gtggagggcc agaacgtgct gctgttcac gacaacatct tccgcttcac 720
gcaggcgaac tccgaggtgt ctgcgtgct gggccgcatt ccggccgcgg tgggctacca 780
gccgacgctt gcggaggatc ttggtatgct gcaggagcgc atcacgtcga caacgaaggg 840
gtcgatcacg tccgtgcagg ccgtgtacgt gccagcggat gatatacgg atcccgcgc 900
cgcgacgacg ttctcgcacc tggacgcgac gactgtgctg gaccgcgcgg tggcggagtc 960
gggcatctac cctgcctgga acccgctgga gtgcgcgtcg cgtatcatgg accctgatgt 1020
gatcgatgtg gaccactaca acgttgcgca ggatcgtg cagatgctga ccaagtacaa 1080
ggagctgcag gatatacatt cggtgcttgg catcgacgag ctgagcggag aagacaaggt 1140
tgttgtggac cgcgcgcgca aggtgacccg gttcctgtcg cagccgttcc aggttgcgga 1200
ggtgttcacg ggcacgacgg gccactacgt gcagctggtc gacacgggtg agtcgtttct 1260
tggcctgctg atgggggtcgt acgaccagat cccggaga 1298

```

<210> 532
 <211> 1297
 <212> DNA
 <213> *Leishmania aethiopica* ATCC 50119

```

<400> 532
ttctcggagg gcgtgcccgc cgtgctgac ggcgtggat tgacggagga ccttggccgc 60
gatgagccgc tgacgtgga gatcgtgcag cacttggacg cgaacaccgg ccgctgcatt 120
gcgatgcaga cgacggacct gctgaagctg aagtcgaagg ttgtgtcgac ccggcggcaac 180
atctctgtgc ccggtgggccc tgagacgtg ggcgcacat tcaacgttct gggcgacgcg 240
atcgaccagc ggggccccgt gggcgagaag atgcgcacg cgatccacgc cgaggcccca 300
aagctggcgg atcaggccgc ggaggacac atcctgacga ccggcatcaa ggtgatcgac 360
ctgattctgc cctactgcaa ggttggcaag atcgccctgt tcggcgggtg ccggtgtggg 420
aagactgtga tcatcatgga gctgatcaac aacgtcgcga agggccacgg tgggtttctc 480
gtgtttgccg gcgttggcga gcgcacgcgc tagggcacgg acctgtacct ggagatgatg 540
cagtcgaagg tgattgacct gaaggcgag tgcgaagtgc tgcttgtgta cgggcagatg 600
aacgagcccc ccgggtgcgc gcgcgcgcgt gcgcagctc cgctgacgat ggcggagtag 660
ttccgcgacg tggagggcca gaacgtgctg ctgttcacg acaacatctt ccgcttcacg 720
caggcgaact ccgaggtgtc tgcgtgctg ggcgcattc cagccgcgtt gggctaccg 780
ccgacgcttg ccgaggatct tggatatgct caggagcgca tcacgtcgac aacgaagggg 840
tcgatcacgt ccgtgcaggc cgtgtacgtg ccagcggatg atatacggg tcccgcgccc 900
gcgacgacgt tctcgcacct ggacgcgacg actgtgctgg accgcgcggg ggcggagtcg 960
ggcatctacc ctgccgtgaa cccgctggag tgcgcgtcgc gtatcatgga ccccgacgtg 1020
atcgatgtgg accactacaa cgttgcgac gatatcgtgc agatgctgac caagtacaa 1080
gagctgcagg atatcattgc ggtgcttggc atcgacgagc tgagcggagga agacaaggtt 1140
gttgtggacc gcgcgcgcaa ggtgacccg ttctgtcgc agccgttcca ggttgcggag 1200
gtgttcacgg gcatgacggg ccactacgtg cagctggtcg acacgggtgga gtcgtttctt 1260

```

ggcctgctga tgggggtcgta cgaccagatc cccggaga

1297

<210> 533

<211> 1298

<212> DNA

<213> Leishmania donovani ATCC 50212

<400> 533

```

cttctcggag ggcgtgccgc ccgtactgac ggcgctggat gtgacggagg accttggccg 60
cgatgagccg ctgacgctgg agatcgtgca gcacttggat gcgaacaccg gccgctgcat 120
tgcatgacag acgacggacc tgctgaagct gaagtcgaag gttgtgtcga ccggcggcaa 180
catctctgtg ccggtggggc gtgagacgct gggccgcac ttcaacgttc tgggcgacgc 240
gatcgaccag cgcggccccc tgggcgagaa gatgcgcacg gcgatccacg ccgaggcccc 300
gaagctggcg gaccaggccg cggaggacac gatcctgacg accggcatca aggtgatcga 360
cctcattctg ccctactgca agggcggcaa gatcggcctg ttcggcgggtg ccggtgtggg 420
caagactgtg atcatcatgg agctgatcaa caacgtcgcg aagggccacg gtggcttctc 480
cgtgtttgcc ggcgttggcg agcgcacgcg cgagggcacg gacctatacc tggagatgat 540
gcagtcgaag gtgattgacc tgaagggcga gtcgaagtgc gtgcttgtgt acgggcagat 600
gaacgagccc ccgggtgccc gcgcgcgcgt tgcgcagtct gcgctgacga tggcggagta 660
cttcgcgcac gtggagggcc agaacgtgct gctgttcacg gacaacatct tccgcttcac 720
gcaggcgaac tccgaggtgt ctgcgctgct gggccgcatt ccggccgccg tgggctacca 780
gccgacgctt gccgaggatc ttggtatgct gcaggagcgc atcacatcga cgacgaaggg 840
gtcgatcacg tccgtgcagg ccgtgtacgt gccggcggat gatatacagg atcccgcgcc 900
cgcgacgacg ttctcgcacc tggacgcgac gactgtgctg gaccgcgcgg tggcggagtc 960
gggcatctac cctgcctgta acccgctgga gtgcgcgtcg cgtatcatgg accccgatgt 1020
gatcgatgtg gaccactaca acgttgcgca ggatatacgtg cagatgctga ccaagtacaa 1080
ggagctgcag gatatacatt cggtgcttgg catcgacgag ctgagcgagg aggacaaggt 1140
tgtggtggac cgcgcgcgca aggtgacccg gttcctgtcg cagccgttcc aggttgcgga 1200
ggtgttcacg ggcattgacg gccactacgt gcagctggcc gacacggtgg agtcgttctc 1260
tggcctgctg atgggggtcgt acgaccagat cccggaga 1298

```

<210> 534

<211> 1298

<212> DNA

<213> Leishmania infantum strain MOU

<400> 534

```

cttctcggag ggcgtgccgc ccgtactgac ggcgctggat gtgacggagg accttggccg 60
cgatgagccg ctgacgctgg agatcgtgca gcacttggat gcgaacaccg gccgctgcat 120
tgcatgacag acgacggacc tgctgaagct gaagtcgaag gttgtgtcga ccggcggcaa 180
catctctgtg ccggtggggc gtgagacgct gggccgcac ttcaacgttc tgggcgacgc 240
gatcgaccag cgcggccccc tgggcgagaa gatgcgcacg gcgatccacg ccgaggcccc 300
aaagctggcg gaccaggccg cggaggacac gatcctgacg accggcatca aggtgatcga 360
cctcattctg ccctactgca agggcggcaa gatcggcctg ttcggcgggtg ccggtgtggg 420
caagactgtg atcatcatgg agctgatcaa caacgtcgcg aagggccacg gtggcttctc 480
cgtgtttgcc ggcgttggcg agcgcacgcg cgagggcacg gacctatacc tggagatgat 540
gcagtcgaag gtgattgacc tgaagggcga gtcgaagtgc gtgcttgtgt acgggcagat 600
gaacgagccc ccgggtgccc gcgcgcgcgt tgcgcagtct gcgctgacga tggcggagta 660
cttcgcgcac gtggagggcc agaacgtgct gctgttcacg gacaacatct tccgcttcac 720
gcaggcgaac tccgaggtgt ctgcgctgct gggccgcatt ccggccgccg tgggctacca 780
gccgacgctt gccgaggatc ttggtatgct gcaggagcgc atcacatcga cgacgaaggg 840
gtcgatcacg tccgtgcagg ccgtgtacgt gccggcggat gatatacagg atcccgcgcc 900
cgcgacgacg ttctcgcacc tggacgcgac gactgtgctg gaccgcgcgg tggcggagtc 960
gggcatctac cctgcctgta acccgctgga gtgcgcgtcg cgtatcatgg accccgatgt 1020
gatcgatgtg gaccactaca acgttgcgca ggatatacgtg cagatgctga ccaagtacaa 1080
ggagctgcag gatatacatt cggtgcttgg catcgacgag ctgagcgagg aggacaaggt 1140
tgtggtggac cgcgcgcgca aggtgacccg gttcctgtcg cagccgttcc aggttgcgga 1200
ggtgttcacg ggcattgacg gccactacgt gcagctggcc gacacggtgg agtcgttctc 1260
tggcctgctg atgggggtcgt acgaccagat cccggaga 1298

```

<210> 535

<211> 1301

<212> DNA

<213> Leishmania gerbilli ATCC 50121

<400> 535

```
gcacttctcg gagggcggtgc cgcccggtgct gacggcgctg gatgtgacgg aggaccttgg 60
ccgcgatgag ccgctgacgc tggagatcgt gcagcacttg gacgcgaaca cgggccgctg 120
cattgcgatg cagacgacgg acctgctgaa gctgaagtcg aagggttggt cgaccgggtg 180
caacatctct gtgccgggtgg gccgtgagac gctggggccg atcttcaacg ttctggggcg 240
tgcgatcgac cagcgcggcc ccgtgggcga gaagatgcgc atggcgatcc acgccgagge 300
cccgaagctg gcggatcagg ccgcggagga cagatcctg acgaccggca tcaaggatgat 360
cgacctgatt ctgccctact gcaagggtgg caagatcggy ctgttcggcg gtgccgggtg 420
gggcaagact gtgatcatca tggagctgat caacaacgtc gcgaaggggc acggtgggtt 480
ctccgtgttt gccggcggtt gcgagcgcac gcgcgagggc acggacctgt acctggagat 540
gatgcagtcg aagggtgatt acctgaagg gcagtcgaag tgcgtgcttg tgtacgggca 600
gatgaacgag ccccggggtg cgcgcgcgcg cgttgccagc tctgcgctga cgatggcgga 660
gtacttccgc gacgtggagg gccagaacgt gctgctgttc atcgacaaca tcttccgctt 720
cacgcaggcg aactccgagg tgtccgcgct gctggggccg attccggccg ccgtgggcta 780
ccagccgacg cttgcccagg atcttggtat gctgcaggag cgcatacgt cgacaacgaa 840
ggggtcgatc acgtccgtgc aggccgtgta cgtgccagcg gatgatata cgatccccg 900
gcccgcgacg acgttctcgc accttgacgc gacgactgtg ctggaccgcg cgggtggcgga 960
gtcgggcacg taccctgccg tgaacccgct ggagtgcgcg tcgcgtatca tggacccccg 1020
tgtgatcgat gtggaccact acaacgttgc gcaggatata gtgcagatgc tgaccaagta 1080
caaggagctg caggacatca ttgcggtgct tggcatcgac gagctgagcg aggaagacaa 1140
ggttgtggtg gaccgcgcgc cgaaggctgac cgggttccct tcgcagccgt tccagggttg 1200
ggaggtgttc acgggcatga cgggccacta cgtgcagctg gtcgacacgg tggagtcgtt 1260
ctctggcttg ctgatggggg cgtacgacca gatcccgag a 1301
```

<210> 536

<211> 1298

<212> DNA

<213> Leishmania hertigi ATCC 50125

<400> 536

```
cttcgcgagg ggcgtgccgc cgggtgctgac gtcgctggat gtgacggaga acctcgcccg 60
cgatgagccg ctgacgctgg agattgtgca gcacttggac gcgaacaccg gtcgctgcat 120
tgcatgacg acgacggacc tgctgaagct gaagtcgaag gtcgtgtcga ccggtggcaa 180
catctctgtg cctgttggcc gcgagacgct gggtcgcatc ttcaacgtgc ttggcgatgc 240
gattgaccag cgcgcccttg tgggtgagaa gatgcgcgat gcgatccacg ccgaggcgcc 300
gaagctggcg gatcaggcgg cagaggacac gatcctgacg accggcatca aggtgatcga 360
tcttattctg ccgtactgca aggggtggtaa gatcgggtctg ttcgggtgggt ccggtgtagg 420
caagactgtg attattatgg agctgatcaa taacgtggcg aagggccacg gtgggttttc 480
cgtgtttgct ggcgtggggc agcgcacgcg cgagggcact gacctgtacc tggagatgat 540
gcagtcgaag gtgattgacc tgaaggcgca atcaaagtgc gtgcttgtgt acggacagat 600
gaacgagccc ccgggtgcgc gtgcgcgcgt tgcgcagctc gcgctgacga tggccgagta 660
cttcgcgatg gtggagggcc agaacgtgct gctgttcatt gacaacatct tccgcttcac 720
gcaggcgaa cccgaggtgt ctgcgctgct gggtcgcat cctgccgccg tgggtaccaa 780
gccgacgctt gcggaggatc tgggcatgct gcaggagcgc attacgtcga cgacgaaggg 840
ctcgattacg tctgtgcagg ccgtgtacgt gcctgcggat gatatacagg acccgccgcc 900
cgcgacgacg ttctcgcaac tggacgcgac gactgtgctg gaccgtgcgg tggcagagtc 960
gggcatttac cctgcgggtga acccgctgga gtgcgcgctg cgtatcatgg accccgatgt 1020
gatcgatgtg gaccactaca acgttgcgca ggatatcgtg cagatgctga ccaagtacaa 1080
ggagctgcag gatatacatt ccgtgcttgg tatcgacgag ctgagcgagg aggacaaggt 1140
tgtggtggac cgcgcgcgca aggtgacccg gttcctgtcg cagccgttcc aggttgcgga 1200
ggtgttactt ggcattgacgg gtcactacgt tcagctggag gacacgggtg agtcgttctc 1260
tggcctactg atgggggtcat acgaccagat cccggaga 1298
```

<210> 537

<211> 1297

<212> DNA

<213> Leishmania major ATCC 50122

<400> 537

```
cttctcggag ggcgtgccgc ccgtgctgac ggcgctggat gtgacggagg accttggccg 60
tgatgagccg ctgacgctgg agatcgtgca gcacttggac gcgaacaccg gccgctgcat 120
tgcatgacg acgacggacc tgctgaagct gaagtcgaag gttgtgtcga cggcgggcaa 180
```



```

catctctgtg cccggtgggcc gtgagacgct gggccgcacg ttcaacgttc tgggcgatgc 240
gatcgaccag cgcggccccc tgggcgagaa gatgcgcatg gcgatccacg ccgaggcccc 300
gaagctggcg gatcaggccg cagaggacac gatcctgacg accggcatca aggtgatcga 360
cttgatcctg ccctactgca aggggtggcaa gatcggcctg ttcggcggtg cccggtgtggg 420
caagactgtg atcatcatgg agctgatcaa caatgtcgcg aagggccacg gtggtttctc 480
cgtgtttgcc ggcgttgccg agcgcacgcg cgagggcacg gacctgtacc tggagatgat 540
gcagtcgaag gtgattgacc tgaagggcga gtcgaagtgc gtgcttgtgt acgggcagat 600
gaacgagccc ccgggtgccc gcgcgcgctg tgcgcagtct gcgctgacga tggcggagta 660
cttcgcgcac gtggagggcc agaactgtct gctgttcatc gacaacatct tccgcttcac 720
gcaggcgaac tccgaggtgt ccgcgctgct gggccgcatt ccggccgccg tgggctacca 780
gccgacgctt gcggaggatc ttggtatgct gcaggagcgc atcacgtcga caacgaaggg 840
gtcgatcacg tccgtgcagg ccgtgtacgt gccagcggat gatatacagg atcccgcgcc 900
cgcgacgacg ttctcgcacc tggatgcgac gactgtgctg gaccgcgcgg tggcggagtc 960
gggcatctac cctgccgtga acccgctgga gtgcgcgtcg cgtatcatgg accccgatgt 1020
gatcgatgtg gaccactaca acgttgcgca ggatatcgtg cagatgctga ccaagtacaa 1080
ggagctgcag gacatcattg cgggtgcttgg catcgacgag ctgagcagag aagacaagggt 1140
tgtggtggac cgcgcgcgca aggtgacccg gttcctgtcg cagccgttcc aggttgcgga 1200
ggtgttcacg ggcgatgacgg gccactacgt gcagctggctc gacacggtgg agtcgttctc 1260
tggcctgctg atggggtcgt acgaccagat cccggag          1297

```

<210> 538

<211> 1297

<212> DNA

<213> Leishmania amazonensis ATCC 50131

<400> 538

```

ttctcggagg gcgtgccgcc cgtgctgacg gcgctggatg tgacggagga ccttggccgc 60
gatgagccgc tgacgctgga gatcgtgcag cacctggacg cgaacaccgg ccgctgcatt 120
gcgatgcaga cgacggacct gttgaagctg aagtcgaagg ttgtgtcgac cggcggcaac 180
atctctgtgc cgggtgggccg tgagacgtcg ggccgcatct tcaacgtgct gggcgacgcg 240
atcgaccagc gcggccccgt gggtgagaag atgcgcattg cgatccacgc cgaggccccg 300
aagctggcgg atcaggccgc ggaggacacg atcctgacga ccggcatcaa ggtgatcgac 360
ctgattctgc cctactgcaa ggggtggcaag atcggcctgt ttggtggcgc cgggtgtgggc 420
aagaccgtga tcatcatgga gttgattaac aacgtcgcga agggccacgg tggtttctcg 480
gtgtttgccg gcgttgccga gcgcacgcgc gagggcacgg acctgtacct ggagatgatg 540
cagtcgaagg tgattgacct gaagggcgag tcgaagtgcg tgcttgtgta cgggcagatg 600
aacgagcccc cgggtgcccg gcgcgcgctt gcgcagtctg cgctgacgat ggcggagtac 660
ttccgagacg tggagggccca gaatgtgctg ctgttcatcg acaacatctt ccgcttcacg 720
caggcgaaat ccgaggtgtc tgcgctgctg ggccgcattc cggccgccgt gggctaccag 780
ccgacgcttg cggaggatct tggatatgctg caggagcgca tcacgtcgac gacgaagggg 840
tcgatcacgt ccgtgcaggc cgtgtacgtg cctgcggatg atatcacgga tccggcgccc 900
gcgacgacgt tctcgcacct ggacgcgacg actgtgctgg accgcgcggt ggcggagtcg 960
gggatctacc ctgccgtgaa cccgctggag tgcgcgtcgc gtatcatgga ccccgatgtg 1020
atcgacgtgg accactacaa cgttgccgag gatatacgtc agatgctgac caagtacaag 1080
gagctgcagg atatcattgc ggtgcttggt atcgacgagc tgagcgagga ggacaagggt 1140
gtggtggacc gcgcgcgcaa ggtgacccgg ttctgtcgc agccgttcca ggttgccggag 1200
gtgttcacgg gcatgacggg ccactacgtg cagctggccg acacggtgga gtcgttctct 1260
gggctgctga tggggtcgta cgaccagatc cccggaga          1297

```

<210> 539

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<221> misc_feature

<222> (3)..(3)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (18)..(18)

<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 539
ccntacatcc tbgtygcncct naacaag

27

<210> 540
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 540
ggdgcntcyt crtcgwantc ctg

23

<210> 541
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 541
gtkgaaatgt tccgcaagct gct 23

<210> 542
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 542
cggaartaga actgsggacg gtag 24

<210> 543
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 543
atcttagtag tttctgctgc tga 23

<210> 544
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 544
aygttgtcgc cmggcattmc cat 23

<210> 545
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

```

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 545
tacatcctbg tygcncntnaa caagtg
26

<210> 546
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<222> (6)..(6)
<223> n may be any nucleotide

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

<400> 546
ccrcgnccgg tratggtgaa gat
23

<210> 547
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

<400> 547
gtacagttgc ttcaggacgt atc
23

<210> 548
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

<400> 548
acgttcgatt tcatcacggt g
21

<210> 549
<211> 24
<212> DNA

```

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 549
gaacgtgata ctgacaaacc ttta 24

<210> 550
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 550
gaagaagaac accaacgttg 20

<210> 551
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 551
gaagaaaaaa tcttcgaact ggcta 25

<210> 552
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 552
tacacggcgcg gtgactacg 19

<210> 553
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 553
ggccgtgttg aacgtggtca aatca 25

<210> 554
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 554
gttccttaca tcgttggttt tctc 24

<210> 555
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 555
tctcgaactt tctctatgta tgca 24

<210> 556
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (7)..(7)
<223> n may be any nucleotide

<220>
<221> modified_base
<222> (7)..(7)
<223> n is a, g, c or t

<400> 556
cggcgcnatc ytsgttggttg c 21

<210> 557
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 557
ccmaggcatr accatctcgg tg 22

<210> 558
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<400> 558
tcnttyaart aygcntgggt

20

<210> 559
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 559
ccgacrgcra yngtytgnck cat

23

<210> 560
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 560
gayttcatya araayatgat yac

23

<210> 561
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<400> 561
acngtnccgc crccctcacg gat

23

<210> 562
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (27)..(27)
<223> n represents a modified base

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<220>
<221> modified_base
<222> (27)..(27)
<223> i

<400> 562
caratgrayg arccnccngg ngynmgngatg

30

<210> 563
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base

<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 563
ggytggtanc cnaacngcnga nggcat

26

<210> 564
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (27)..(27)
<223> n represents a modified base

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>

<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<220>
<221> modified_base
<222> (27)..(27)
<223> i

<400> 564
tayggncara tgaaygarcc nccnggnaa

29

<210> 565
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<400> 565
ggytgrtanc cnacngcnga nggdat

26

<210> 566
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)

<223> i

<220>

<221> modified_base

<222> (15)..(15)

<223> i

<220>

<221> modified_base

<222> (18)..(18)

<223> i

<220>

<221> modified_base

<222> (21)..(21)

<223> i

<400> 566

ttyggnggng cnggngtngg naarac

26

<210> 567

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (6)..(6)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (9)..(9)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (18)..(18)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (21)..(21)

<223> n represents a modified base

<220>

<221> modified_base

<222> (6)..(6)

<223> i

<220>

<221> modified_base

<222> (9)..(9)

<223> i

<220>

<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<400> 567
tcrtcngcng gnacrtanay ngcytg

26

<210> 568
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 568
rtnatnggng cngtnrtnnga ygt

23

<210> 569
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)

<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 569
rtnrtnnggns cngtnrtnga tat

23

<210> 570
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>

<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 570
rtnrynggnc cngtnrtnga ygt

23

<210> 571
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 571
rtnrtnngnc cngtnrtnnga tgt

23

<210> 572
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (15)..(15)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (18)..(18)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base

<222> (6)..(6)

<223> i

<220>

<221> modified_base

<222> (9)..(9)

<223> i

<220>

<221> modified_base

<222> (12)..(12)

<223> i

<220>

<221> modified_base

<222> (15)..(15)

<223> i

<220>

<221> modified_base

<222> (18)..(18)

<223> i

<400> 572

rtntnnggns cngtnrtnga

20

<210> 573

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (3)..(3)

<223> n represents a modified base

<220>

<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 573
ccnccnacca trtaraangc

20

<210> 574
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 574
atngcnatgg ayggnacnga rgg

23

<210> 575
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<222> (2)..(2)
<223> n represents a modified base

<220>
<221> modified_base
<222> (2)..(2)
<223> i

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 575
tnaccatttc agtaccttct ggtaa

25

<210> 576
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 576
aacttcrtca agaaggytggt ttacaa

26

<210> 577
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 577
catgattgaa ccatccacca

20

<210> 578
<211> 20
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 578

catgattgaa gcttccacca

20

<210> 579

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 579

gaaggccgtg ctggtgagaa

20

<210> 580

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 580

gctaaaccag ctacaatcac tccac

25

<210> 581

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 581

acatcggtgc attattacgt gg

22

<210> 582

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 582

tttcaacttc gtcgttgaca cgaacagt

28

<210> 583

<211> 35

<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 583
caactgcttt ttggatatct tctttaatac caacg 35

<210> 584
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 584
acatgacaca tctaaaacaa 20

<210> 585
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 585
accacatact gaattcaaag 20

<210> 586
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 586
cagaagtata cgtattatca 20

<210> 587
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 587
cgtattatca aaagacgaag 20

<210> 588
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 588
tcttctcaaa ctatcgtcca 20

<210> 589
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 589
gcacgaaact tctaaaacaa 20

<210> 590
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 590
tatacgtatt atctaaagat 20

<210> 591
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 591
tcctggttct attacaccac 20

<210> 592
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 592
caaagctgaa gtatacgtat 20

<210> 593
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:

Oligonucleotide

<400> 593 20
ttcactaact atcgcccaca

<210> 594
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 594 20
attggtatcc atgacacttc

<210> 595
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 595 20
ttaaagcaga cgtatacggt

<210> 596
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 596 20
gaaattattg gtatcaaaga

<210> 597
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 597 20
attggtatca aagaaacttc

<210> 598
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 598
aattacacct cacacaaaat 20

<210> 599
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 599
cggatgaagaa atcgaaatca 20

<210> 600
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 600
atgcaagaag aatcaagcaa 20

<210> 601
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 601
gtttcacgtg atgatgtaca 20

<210> 602
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 602
aagttgaagt tgttggtatt 20

<210> 603
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 603

ggtattaaag acgaaacatc

20

<210> 604
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 604
ggtgatgaag tagaaatcgt

20

<210> 605
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 605
gaaatgttcc gtaaattatt

20

<210> 606
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 606
attagactac gctgaagctg

20

<210> 607
<211> 821
<212> DNA
<213> Enterococcus faecalis ATCC 29212

<400> 607
cggagctatc ttagtagttt ctgctgctga tggctctatg cctcaaacac gtgaacatat 60
cttattatca cgtaacgttg gtgtaccata catcgttgta ttcttaaaca aaatggatat 120
ggttgatgac gaagaattat tagaattagt agaaatggaa gttcgtgact tattatcaga 180
atacgatttc ccaggcgatg atgttccagt tatcgcaggt tctgctttga aagctttaga 240
aggcgacgag tcttatgaag aaaaaatctt agaattaatg gctgcagttg acgaatatat 300
cccaactcca gaacgtgata ctgacaaacc attcatgatg ccagtcgaag acgtattctc 360
aatcactgga cgtggtactg ttgctacagg acgtggtgaa cgtgggtgaag ttcgcgttgg 420
tgacgaagtt gaaatcgttg gtattaaaga cgaacatctt aaaacaactg ttacaggtgt 480
tgaaatgttc cgtaaattat tagactacgc tgaagcaggc gacaacttcg gtgctttatt 540
acgtgggtga gcacgtgaag atatcgaacg tggacaagta ttagctaaac cagctacaat 600
cactccacac acaaaattca aagctgaagt atacgtatta tcaaaagaag aaggcggacg 660
tcacactcca ttcttcacta actaccgtcc tcaattctac ttccgtacaa cagacgttac 720
tggtgttgta gaattgccag aagggtactga aatggtaatg cctgggtgata acgttgctat 780
ggacgttgaa ttaattcacc caatcgctat cgaagacgga a 821

<210> 608
<211> 751

<212> DNA

<213> *Enterococcus faecium* ATCC 19434

<400> 608

```
cggagctatc ttggtagttt ctgctgctga cggcccaatg cctcaaactc gtgaacacat 60
cctattgtct cgtcaagttg gtgttcctta catcgttgta ttcttgaaca aagtagacat 120
ggttgatgac gaagaattac tagaattagt tgaaatggaa gttcgtgacc tattaacaga 180
atacraattc cctggtgrcg atgttcctgt agttgctgga tcagctttga aagctctaga 240
aggcgacgct tcatacgaag aaaaaattct tgaattaatg gctgcagttg acgaatacat 300
cccaactcca gaacgtgaca acgacaaacc attcatgatg ccagttgaag acgtgttctc 360
aattactgga cgtggtactg ttgctacagg tcgtgttgaa cgtggacaag ttcgcttg 420
tgacgaagtt gaagttgttg gtattgctga agaaacttca aaaacaacag ttactggtgt 480
tgaaatgttc cgtaaattgt tagacyacgc tgaagctgga gacracattg gtgctttact 540
acgtggtggt gcacgtgaag acatccaacg tggacaagtt ttagctaaac cagggtacaat 600
cacacctcrt acaaaaattct ctgcagaagt atacgtgttg acaaaagaag aagggtggacg 660
tcatactcca ttcttacta actaccgtcc acaattctac ttccgtacaa ctgacgtaac 720
aagggtgtgtt gaattaccag aaggaactga a 751
```

<210> 609

<211> 751

<212> DNA

<213> *Enterococcus gallinarum* ATCC 49573

<400> 609

```
cggtgcgatc ttagtagtat ctgctgctga cggtcctatg cctcaaactc gtgaacacat 60
cttgttatca cgtaacgttg gcgwaccata catcgttggt ttcttgaaca aaatggatat 120
ggttgaygac gaagaattgc tagaattagt tgaaatggaa gttcgtgacc tattgtctga 180
atatgacttc ccaggcgacg atgttcctgt aatcgccggt tctgctttga aagctcttga 240
aggagatcct tcatacgaag aaaaaatcat ggaattgatg gctgcagttg acgaatacgt 300
tccaactcca gaacgtgata ctgacaaacc attcatgatg ccagtcgaag acgtattctc 360
aatcactgga cgtggtactg ttgctacagg ccgtgttgaa cgtggacaag ttcgcttg 420
tgatgaagta gaaatcgttg gtattgctga cgaaactgct aaaacaactg taacagggtgt 480
tgaaatgttc cgtaaattgt tagactatgc tgaagcaggg gataacattg gtgcattgct 540
acgtgggggt gctcgtgaag acatccaacg tggacaagta ttggctaaag ctggtacrat 600
cacacctcat acaaaaattca aagctgaagt ttatgttttg acaaaagaag aagggtggcrg 660
tcacactcca ttcttacta actaccgtcc tcagttctac ttccgtacaa ctgacgtaac 720
tggtgttgtt gaattaccag aaggaactga a 751
```

<210> 610

<211> 891

<212> DNA

<213> *Haemophilus influenzae* Rd strain KW20

<400> 610

```
aatatgatta ctggtgcggc acaaatggat ggtgctatct tagtagtagc agcaacagat 60
ggtcctatgc cacaaactcg tgaacacatc ttattaggtc gccaagtagg tgttccatac 120
atcatcgtaa tcttaaacaa atgcgacatg gtagatgacg aagagttatt agaattagtc 180
gaaatggaag ttctgtgaact tctatctcaa tatgacttcc cagggtgacga tacaccaatc 240
gtacgtgggt cagcattaca agcgttaaac ggcgtagcag aatgggaaga aaaaatcctt 300
gagttagcaa accacttaga tacttacatc ccagaaccag aacgtgcgat tgaccaaccg 360
ttccttcttc caatcgaaga tgtgttctca atctcaggtc gtggtactgt agtaacaggt 420
cgtgtagaac gaggtattat ccgtacaggt gatgaagtag aaatcgctcg tatcaaagat 480
acagcgaaaa ctactgtaac ggggtgttgaa atgttccgta aattacttga cgaagggtcgt 540
gcagggtgaaa acatcggtgc attattacgt ggtaccaaac gtgaagaaat cgaacgtggt 600
caagtattag cgaaaccagg ttcaatcaca ccacacactg acttcgaatc agaagtgtac 660
gtattatcaa aagatgaagg tggcgtcat actccattct tcaaaggtta cgtgccacaa 720
ttctatttcc gtacaacaga cgtgactggt acaatcgaat taccagaagg cgtggaaatg 780
gtaatgccag gcgataacat caagatgaca gtaagcttaa tccacccaat tgcgatggat 840
caagggtttac gtttcgcaat ccgtgaaggt ggccgtacag taggtgcagg c 891
```

<210> 611

<211> 818

<212> DNA

<213> *Staphylococcus epidermidis* ATCC 14990

```

<400> 611
cggcggtatc ttagttgtat ctgctgctga cgggtccaatg ccacaaactc gtgaacacat 60
cttattatca cgtaacggtg gtgtaccagc attagttgta ttcttaaaca aagttgacat 120
ggtagacgac gaagaattat tagaattagt tgaaatggaa gttcgtgact tattaagcga 180
atatgacttc ccaggtgacg atgtacctgt aatcgctggt tctgcattaa aagcattaga 240
aggcgatgct gaatacgaac aaaaaatctt agacttaatg caagcagttg atgattacat 300
tccaactcca gaacgtgatt ctgacaaacc attcatgatg ccagttgagg acgtattctc 360
aatcactggt cgtggtactg ttgctacagg ccgtggtgaa cgtggtcaaa tcaaagttgg 420
tgaagaagtt gaaatcatcg gtatgcacga aacttctaaa acaactgtta ctggtgtaga 480
aatgttccgt aaattattag actacgctga agctggtgac aacatcggtg ctttattacg 540
tggtgttgca cgtgaagacg tacaacgtgg tcaagtatta gctgctcctg gttctattac 600
accacacaca aaattcaaag ctgaagtata cgtattatct aaagatgaag gtggacgtca 660
cactccattc ttcactaact atcgcccaca attctatttc cgtactactg acgtaactgg 720
tggttgaaac ttaccagaag gtacagaaat ggttatgcct ggcgacaacg ttgaaatgac 780
agttgaatta atcgctccaa tcgctatcga agacggaa 818

```

<210> 612

<211> 825

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 9150

```

<400> 612
ggcgcgatcc tggttggtgc tgcgactgac ggcccgatgc cgcagaccgc tgagcacatc 60
ctgctgggtc gtcaggtagg cgttccgtac atcatcggtt tcctgaacaa atgcgacatg 120
ggtgatgacg aagagctgct ggaactgggt gaaatggaag ttcgtgaact tctgtctcag 180
tacgacttcc cggcgacgca caccgcatc gttcgtgggt ctgctctgaa agcgtggaa 240
ggcgacgcag agtgggaagc gaaaatcatc gaactggctg gcttctgga ttcttacatc 300
ccggaaccag agcgtgcat tgacaagccg ttctgctgc cgatcgaaga cgtattctcc 360
atctccggtc gtggtaccgt tggtaccggt cgtgtagaac gcggtatcat caaagtgggc 420
gaagaagttg aaatcggttg tatcaaagag actcagaagt ctacctgtac tggcgttgaa 480
atgttccgca aactgctgga cgaaggccgt gccggtgaga acgtaggtgt tctgctgcgt 540
ggtatcaaac gtgaagaaat cgaacgtggt caggctactg ctaagccggg caccatcaag 600
ccgcacacca agttcgaatc tgaagtgtac attctgtcca aagatgaagg cggccgtcat 660
actccgttct tcaaaggcta ccgtccgcag ttctacttcc gtactactga cgtgactggc 720
accatcgaac tgccggaagg cgtagagatg gtaatgccgg gcgacaacat caaatgggtt 780
gttaccctga tccaccgat cgcaatggac gacggtctgc gtttc 825

```

<210> 613

<211> 778

<212> DNA

<213> *Serratia ficaria* ATCC 33105

```

<400> 613
ggcgctatcc tggttggtgc tgcgactgac ggcccgaatgc ctcagaccgc tgagcacatc 60
ctgctgggtc gycagggttg cgttcctttc atcatcgtrt tcatgaacaa atgcgacatg 120
gttgatgatg aagagctgct ggaactggta gaaatggaag ttcgcgaact gctgtccgct 180
tacgacttcc ctggcgatga cctgccggtg attcgcggtt ccgcgctgaa agcgtggaa 240
ggcgaagccg agtgggaagc taaaatcatc gagctggctg amcmsctgga tacttacatc 300
ccagaaccag agcgcgctat cgacaagccg ttctgctgc caatcgaaga cgtattctcc 360
atctccggtc gtggtaccgt ggttaccggt cgtggtgagc gcggtatcat caaagtggc 420
gaagaagttg aaatcggttg tatcaaagac accgtcaagt ctacctgtac cggcgttgaa 480
atgttccgca aactgctgga cgaaggccgt gccggtgaga acgtaggtgt tctgctgcgt 540
ggtatcaagc gtgaagacat cgaacgtggt caggttcttg ctaaaccagg ttccatcaag 600
ccgcacaccc agttcgattc agaagtgtac atcctgagca aagaagaagg tggtcgtcac 660
ackcattct tcaaaggcta ccgtccacag ttctacttcc gtactactga cgtgaccggt 720
accatcgaac tgccagaagg cgttgagatg gtaatgcctg gcgacaacgt gaacatga 778

```

<210> 614

<211> 653

<212> DNA

<213> *Enterococcus malodoratus* ATCC 43197

<400> 614
gtgcgatctt agtagtatca gctactgatg gtccaatgcc tcaaactcgt gaacacattt 60
tggtatcacg tcaagttggg gttaaagcact tgatcgtttt cttgaacaaa gtagatttag 120
ttgatgacga agaattgatc gacttagttg aaatggaagt acgtgaatta ctttctgaat 180
atgggttccc aggtgatgat attccagtcg ttaaagggtc tgctttgaaa gcattagaag 240
gcgatccaga acaagaacaa gttattcttg atttgatgga taccgttgat gaatatatcc 300
caacacctga acgtgacaat gacaaaccgt tcttgttacc agttgaggat gttttctcga 360
tcacaggacg tgggtactgta gcttctgggc gtatcgaccg tggcgaagtt aaagtcggcg 420
atgaaattga aatcatcggg atcaaaccctg aagttcaaaa agcaatcgtt actggacttg 480
aaatgttccg taaaacattg gattatgggtg aagctggcga taacgttggg gttctattac 540
gtgggattac acgtgatgaa atcgaacgtg gccaaagtatt agctaaacca ggttcaatca 600
caccacatac taagttcaaaa gccgaagtat atgtgttgac gaaagaagaa ggt 653

<210> 615
<211> 829
<212> DNA
<213> *Enterococcus durans* ATCC 19432

<400> 615
ccattctagt tgtatctgca acagatggac caatgccaca aacacgtgaa catattttat 60
tgtcacgtca agtaggtggt aaatatattga tctgtcttctt gaacaaaatc gacttagtag 120
atgatgaaga attgattgat cttgtcgaaa tgggaagttcg tgaattatta agcgaatatg 180
gtttcccgagg tgacgataca ccagtcacatc aaggttcagc attaaaagct ttacaaggag 240
atcctgatgc agaagcagct atcatggaat tgatggatac tgttgatgaa tatatcccaa 300
caccagaacg tgatacagac aaaccattat tgttaccagt ggaagatgtc ttctcaatca 360
caggtcgtgg gactgttgct tcaggtcgta tcatcgctgg tgcagttcgt gtaggtgatg 420
aaatcgaaat cgtcgggtatc aaacctgaaa cacaaaaagc tgttgtaact ggggtcgaaa 480
tggtccgcaa gacattagac tatggtgaaag caggagataa cgttggggta ttgttacgtg 540
gtatccaacg tgaagatatac gaacgtggac aagtaatcgc aaaaccaggt tcaatcacac 600
cacatacaaa attcaaagca gaagtgtacg tattgacaaa agaagaaggt ggacgtcata 660
caccattctt caataactat cgtccacaat tctacttccg tacaactgac gtaactggaa 720
caatcgtttt acctggaggc actgaaatgg ttatgcctgg agataacgta acgatcgacg 780
ttgaattgat ccatccagtt gccatcgaaa acggaacaac tttctctat 829

<210> 616
<211> 669
<212> DNA
<213> *Enterococcus pseudoavium* ATCC 49372

<400> 616
ggtgcaattt tagtagtatc tgctactgat ggcccaatgc cacaacacg tgaacatatc 60
ttgttatcac gtcaagtagg ggttaaacac ttaatcgctc tcttgaacaa agttgattta 120
gttgatgatg aagaattgat cgatttagtt gaaatggaag ttcgggaatt gctttctgaa 180
tatggtttcc cagcgatga tattccagta cttaaagggt ctgctttgaa agctttagaa 240
ggcgatcctg aacaagaaca agtaatcctt gacttgatgg atacggttga tgaatacatc 300
ccaacgcctg aacgtgatac tgacaaacca ttcttgttac cagtcgaaga tgtcttctca 360
atcacaggac gtggtacggg tgcactctgg cgtatcgatc gtgggggaag taaagtcggg 420
gatgaagttg aaatcatcgg gatcaaacct gaagtgcata aagctgtcgt aactggacta 480
gaaatgttcc gtaagacatt ggattacggg gaagctggcg ataactgttg ggttctatta 540
cgtgggatta ctctgatga aatcgaacgt ggacaagtat tagctaaacc aggttcaatc 600
actccacata cgaaattcag tgcagaagtt tatgtattga cgaaagaaga aggtggccgt 660
catacgcca 669

<210> 617
<211> 835
<212> DNA
<213> *Enterococcus dispar* ATCC 51266

<400> 617
cggggcaatt ttagttgtat ctgcaactga tggcccaatg ccacaaacac gtgaacacat 60
ttgttagctt cgtcaagtag ggggttaata tttaatcgct tcttgaaca aaacagattt 120
agttgatgat gaagaattat tggaactagt tgaaatggaa gttcgtgaat tattaatatga 180
atacaatttc cctggcgatg atattcctgt tattcgcgga tctgctttaa aagcattaga 240

aggcgatcca	gaacaagaag	aagtaattat	gaacttgatg	gatactgtgg	atgaatatat	300
cccaactcca	gaacgtgaca	atgataaacc	attcttggtta	ccagtgggaag	atgtcttcac	360
aattactggg	cgtgggtactg	ttgcttcagg	tcgtatcgac	cgtgggtaaag	tcaacgttgg	420
tgatgaaatt	gaaattatcg	gaattaaacc	agaaacacaa	aaagctgttg	taaccggttt	480
ggaaatgttc	cgtaaaactt	tggattatgg	tgaagctggt	gataacgttg	gggtcttatt	540
acgtgggatt	actcgtgatg	aagtagaacg	tggtcaagta	ttagcaaaac	caggttccat	600
tacaccgcat	accaaattta	aaggtgaagt	ttatatctta	acaaaagaag	aaggtgggacg	660
tcatactcct	ttctttaata	actatcgtcc	tcaattttat	ttccgtacaa	ctgatgtgac	720
tggtaacatc	gcattacctg	aaggaactga	aatggtaatg	cctggtgata	atgtaacaat	780
tgaagttgaa	ttgattcatc	caatcgccgt	tgaaaaaggg	actactttct	caatt	835

<210> 618

<211> 673

<212> DNA

<213> *Enterococcus avium* ATCC 14025

<400> 618

ggtgcaatcc	tagtagtata	agctactgat	ggtccaatgc	cgcaaacacg	tgaacatatt	60
ttgctatcac	ggcaagtggg	tgtaaacaac	ttaatcgtat	ttttaaacia	agttgattta	120
gtcgatgatg	aagaattgat	cgatctagtt	gaaattggaag	tccgtgaatt	actttctgaa	180
tatggtttcc	caggtgacga	tattccagtt	ctcaaagggt	cagctttgaa	agcattagaa	240
ggcgatcctg	aacaagaaca	agtaatcctt	gatttaaatgg	atacagttga	cgaatatatc	300
ccaactccag	aacgtgacac	tgacaagcca	ttcttggttac	cagtcgaaga	tgtattttct	360
atcactgggtc	gtgggactgt	agcgtctgga	cggattgatc	gtgggtgaagt	taaagtcggc	420
gatgaagttg	aaatcatcgg	gatcaaacct	gaaattcaaaa	aagcagtcgt	aactggactt	480
gaaatgttcc	gtaaaacttt	agattatggg	gaagctggcg	ataacgttgg	ggttctatta	540
cgtgggatta	cacgtgatga	aatcgaacgt	ggtcaagtct	tagctaaacc	aggttcaatc	600
acaccacata	caaaattcag	tgcagaagtt	tacgtattga	cgaaagaaga	aggtgggacgt	660
catacaccat	ctt					673

<210> 619

<211> 1713

<212> DNA

<213> *Saccharomyces cerevisiae*

<400> 619

tttcatattt	ttaaggattt	tgttttagca	cccatccgac	ctcagtcfaat	atatacctttc	60
gcgaccaggc	tttctctcct	tttgctgcta	actgggttaca	gatttttcta	tttttgggtca	120
tttttatctt	tgaaactgat	taagctgaaa	aaatttgagc	ttctttgttg	taaactatttt	180
tgtgctttca	gttttattct	agctcgacaa	aggtaacaga	caaaaatgtc	agctttatta	240
ccaagattac	tcacaagaac	agctttttaa	gcttctggga	aacttctgag	gctctcttca	300
gtaattttca	ggaccttttc	tcaaactact	acttctctatg	cagctgcttt	tgatcggtcc	360
aaaccgcata	taaatatagg	tacgatcggc	catggtgatc	atgggaagac	aactttaacc	420
gcagccatta	cgaaaacgtt	agccgcaaaa	ggtgggtgcca	acttcttgga	ctatgctgcc	480
atcgataagg	ctccggaaga	aagagctcgt	ggtattacaa	tttctactgc	acacgtggaa	540
tacgaaacgg	ccaagagaca	ttattctcac	gtcgactgtc	caggccacgc	tgattacatc	600
aagaatatga	ttaccgggtg	tgctcaaatg	gatgggtgcta	tcattgttgt	agctgctacc	660
gatggacaaa	tgccccaac	tagagaacat	ttacttttgg	ccagacaagt	tggtgtccaa	720
catattgtcg	tttttggtta	caaggttgat	accattgatg	atccagaaat	gtagaggtta	780
gtcgaaatgg	aaatgagaga	actttttaaac	gaatatgggt	ttgacgggtga	taatgctcca	840
attatcatgg	gttctgcctt	ttgcgctttg	gaaggctgcc	aacctgaaat	tggggagcag	900
gccatcatga	aacttttgga	tcagtggtat	gagtataatt	ctacacctga	aagagatttg	960
aacaagcctt	cttctgatgc	cgttggaagt	atcttctcta	tctccggtag	aggtactgtg	1020
gtcactgggtc	gtgtggaaag	gggtaattta	aagaaagggtg	aggaattgga	aattgtttgt	1080
cacaactcca	ccccattgaa	aacaacagtt	actgggtattg	aaatgttttag	aaaggaattg	1140
gactctgcta	tggcaggtga	caatgcgggt	gttttactta	gaggtatcag	gagagatcaa	1200
ttgaagagag	gtatgtctct	agctaagcca	ggtaccgtta	aagcccatac	aaagattatga	1260
gcctctttgt	acatttttatc	caaagaggaa	ggtggtagac	attctgggtt	tgggtgaaaac	1320
tacagaccac	aaatgtttat	aagaacagct	gatgttacag	ttgtgatgag	atttctctaag	1380
gaggttgaag	atcattctat	gcaagttatg	ccagggtgaca	atgttgaaat	ggaatgtgat	1440
ttgatccatc	ctaccccatc	agaagttggg	caacgtttca	atatcagaga	gggtggaaga	1500
actgttggta	ccggtctaata	cacacgtatt	attgaaataga	cttattgatg	caactggag	1560
atattttctat	atatttctgtt	catttccctt	ctcataatat	atacttgttt	cgttaaaatt	1620
ttatacgtgt	aaataaagtg	ccataaattt	ttcagcttta	cttttggttag	agtcctgcta	1680

gcactagatt ttacaatttc atgtgcacac acc 1713

<210> 620
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 620
attggtgcat tgctacgt 18

<210> 621
<211> 751
<212> DNA
<213> Enterococcus faecium ATCC 19434

<400> 621
tggtgcaatc ttagttgttt ctgcaactga cgggtccgat cctcaaacac gtgaacacat 60
tttattgtca cgccaagtgt gtgtaaaata cctgattggt ttcttgaaca aagttgattt 120
agtcgatgat gaagaattga tcgatttggg agaaatggaa gttcgcgagt tattgagcga 180
atatggtttc ccaggcgatg acactcctgt gatcaaaggt tccgcattaa aagcattgca 240
aggcgatcca gatgctgaag ctgctattat ggaattgatg gatacagtag atgaatatat 300
cccaacacca gaacgtgata cagataaacc attactattg ccagtggaaag acgtcttctc 360
aattacagggt cgaggaactg ttgcctcagg tcgtattgat cgtggtgctg ttcgtgtcgg 420
tgatgaggta gagatcgtag ggatcaaacc tgaaacacaa aaagcagttg taacagggtgt 480
agaaatgttc cgtaaaacgt tagattacgg ggaagctggg gataacgtag gcgtgttggt 540
acgggggatc caacgtgacg atatcgaacg tggacaagta cttgctaaac caggttccat 600
tactccacat acaaaattca aagcagaagt gtacgtgttg acaaaagaag aaggtggacg 660
tcatactcca ttcttcaaca actatcgtcc acagttctac ttccgcacaa ctgatgttac 720
aggaacaatc acattgccag aagatacaga a 751

<210> 622
<211> 750
<212> DNA
<213> Saccharomyces cerevisiae ATCC 13264

<400> 622
gtcaaatggg acgaatccag attccaagaa attgtcaagg aaacctccaa ctttatcaag 60
aaggttggtt acaacccaaa gactgttcca ttctgtccaa tctctggttg gaacggtgac 120
aacatgattg aagctaccac caacgctcca tggtagaagg gttgggaaaa ggaaaccaag 180
gccggtgtcg tcaagggtaa gactttgttg gaagccattg acgccattga acaaccatct 240
agaccaactg acaagccatt gagattgcca ttgcaagatg ttacaagat tgggtggtatt 300
ggtactgtgc cagtcggtag agttgaaacc ggtgtcatca agccaggtat ggttggttact 360
ttcgccccag ctggtgttac cactgaagtc aagtcggttg aaatgcatca cgaacaattg 420
gaacaagggtg ttccagggtga caacgttggg ttcaacgtca agaacgtttc cgttaaggaa 480
atcagaagag gtaacgtctg tggtagacgt aagaacgatc caccaaaggg ttgcgcttct 540
ttcaacgcta ccgtcattgt tttgaacctt ccagggtcaaa tctctgctgg ttactctcca 600
gttttggatt gtcacactgc tcacattgct tgtagattcg acgaattggt ggaaaagaac 660
gacagaagat ctggtaagaa gttggaagac catccaaagt tcttgaagtc cgggtgacgct 720
gctttggtca agttcgttcc atctaagcca 750

<210> 623
<211> 1269
<212> DNA
<213> Cryptococcus neoformans ATCC 44104

<400> 623
tcttgaaagc ttaaggccga gcgagagcga ggtatcacca tcgacattgc tctttggaag 60
ttcgagaccc ccagggtacca ggtcaccgtc attgacgccc ccggtcaccg agacttcatc 120

aagaacatga	tcaccggtac	ctcccaggct	gactgtgcca	tcctcatcat	tgccaccggt	180
atcgggtgagt	tcgaggccgg	tatctccaag	gacggtcaga	cccagagagca	cgccctcctc	240
gccttcaccc	tcgggtgtcag	gcagctcatt	gttgcttgca	acaagatgga	cacctgcaag	300
tggtccgagg	accgattcaa	cgaaatcgtc	aaggagacca	acggtttcat	caagaagggt	360
ggttacaacc	ccaaggctgt	ccccttcgtc	cccattctctg	gttggcacgg	tgacaacatg	420
ttggaggaga	ccaccaagtc	agtgaatccg	cttctacgtg	atgagatgtt	tttctgactt	480
tccgtgcagc	atgccctggt	acaagggatg	gaccaaggag	accaagtctg	gtgtttccaa	540
gggtaagacc	ctcctcgagg	ccatcgacgc	catcgagccc	cctaccgcac	ccaccgacaa	600
gccccctcgt	ctccctctcc	aggacgtcta	caagatcggt	ggatatcgga	cagtccctgt	660
cggccgagtc	gagaccggtg	tcatcaaggc	cggtatgttg	tctcatctct	cttgtctcgt	720
aacatgcgtc	tcgtaacatg	cgcttacttc	atthttcaggt	atggctcgtc	agttcgcccc	780
caccaacgtc	accactgaag	tcaagtcctg	tgagatgcac	cacgagcaga	tccccgaggg	840
tcttcccggg	gacaacgttg	gtttcaacgt	caagaacgtt	tccatcaagg	acatccgacg	900
aggtaacgtc	tgtgggtgact	ccaagaacga	ccccctatg	gaggctgctt	ctttcaacgc	960
ccaggttatc	gtccttaacc	accctgggtc	gatcggtgcc	ggttacaccc	ccgttctcga	1020
ctgtcacact	gcccgttaagc	ctgacccaat	acctccaaca	tacctttgaa	gctgaccctt	1080
tctagacatt	gcctgcaagt	ttgctgagtt	gatcgagaag	attgaccgac	gaaccggtaa	1140
ggtcacggag	gcccggccca	agttcgtcaa	gtctgggtgac	gcccgcattg	tcaagcttgt	1200
tgcccagaag	ccccctctgtg	ttgagaccta	cgccgactac	ccccctcttg	gtcgattcgc	1260
cgctccgaga						1269

<210> 624

<211> 753

<212> DNA

<213> Candida albicans ATCC 36801

<400> 624

tctgtcaaat	gggacaaaaa	cagattttgaa	gaaatcatca	aggaaacctc	caacttcgtc	60
aagaagggttg	gttacaaccc	aaagactggt	ccattcgttc	caatctctgg	ttggaatggt	120
gacaacatga	ttgaaccatc	caccaactgt	ccatggtaca	agggttgga	aaaggaaacc	180
aaatccggta	aagttaactg	taagaccttg	ttagaagcta	ttgacgctat	tgaaccacca	240
accagaccaa	ccgacaaacc	attgagattg	ccattgcaag	atgtttacaa	gatcggtggt	300
attggtactg	tgccagtcgg	tagagttgaa	actggtatca	tcaaagccgg	tatggttggt	360
actttcgccc	cagctggtgt	taccactgaa	gtcaaataccg	ttgaaatgca	tcacgaacaa	420
ttgggtgaag	gtgttccagg	tgacaatggt	ggtttcaacg	ttaagaacgt	ttccgttaaa	480
gaaattagaa	gaggtaacgt	ttgtgggtgac	tccaagaacg	atccaccaa	gggttggtgac	540
tctttcaatg	cccaagtcac	tgttttgaac	catccagggtc	aaatctctgc	tggttactct	600
ccagtcttg	attgtcaccc	tgcccacatt	gcttgtaaat	tcgacacttt	ggttgaaaag	660
attgacagaa	gaactggtaa	gaaattggaa	gaaaatccaa	aattcgtcaa	atccggtgat	720
gctgctatcg	tcaagatggt	cccaaccaa	cca			753

<210> 625

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 625

cgttgaagac acgacccaaa gtatcc

26

<210> 626

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 626

taccaccttt taagtaaggt gctaat

26

<210> 627

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 627

attgtctata aaaatggcga taagtc

26

<210> 628

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 628

aaaatggcga taagtcacaa aaagta

26

<210> 629

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 629

aagttccatc tcaacaaggt caata

25

<210> 630

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 630

cggagctatc ctagtcgttt ca

22

<210> 631

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<221> misc_feature

<222> (13)..(13)

<223> n represents a modified base

<220>

<221> modified_base
<222> (13)..(13)
<223> i

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 631
cagaccaacy ganaarccat tragat

26

<210> 632
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 632
cccttttggtg grtcstkctt gga

23

<210> 633
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<222> (13)..(13)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (19)..(19)
<223> n represents a modified base

<220>
<221> modified_base
<222> (13)..(13)
<223> i

<220>
<221> modified_base
<222> (19)..(19)
<223> i

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 633
cagaccaacy ganaarcnt tragat

26

<210> 634
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<222> (15)..(15)

<223> n represents a modified base

<220>

<221> modified_base

<222> (15)..(15)

<223> i

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 634

aacacygtca grrcnattgc yatgga

26

<210> 635

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<221> misc_feature

<222> (9)..(9)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (21)..(21)

<223> n represents a modified base

<220>

<221> modified_base

<222> (9)..(9)

<223> i

<220>

<221> modified_base

<222> (21)..(21)

<223> i

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 635

aaaccrgtna rrgcractct ngctct

26

<210> 636

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> modified_base

<222> (12)..(12)

<223> i

<400> 636
actggygttg anatgttccg yaa

23

<210> 637
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<400> 637
acgtcagtn g tacggaarta gaa

23

<210> 638
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<400> 638
ccaatgccac aaacncgtga rcacat

26

<210> 639
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (25)..(25)
<223> n represents a modified base

<220>
<221> modified_base

<222> (25)..(25)

<223> i

<400> 639

tttacggaac atttcwacac cwgtnacac

28

<210> 640

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (9)..(9)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (15)..(15)

<223> n represents a modified base

<220>

<221> modified_base

<222> (9)..(9)

<223> i

<220>

<221> modified_base

<222> (15)..(15)

<223> i

<400> 640

tccatggtnt wyggncarat gaa

23

<210> 641

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (15)..(15)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (18)..(18)

<223> n represents a modified base

<220>

<221> modified_base

<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 641
tgataaccwa cngcngangg catacg

26

<210> 642
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 642
ggcgtnggng arcgnacncg tga

23

<210> 643
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Description of
Artificial Sequence Oligonucleotide

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<400> 643
actggngtng aratgttccg yaa

23

<210> 644
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<400> 644
acgtcngtng tnckgaarta gaa

23

<210> 645
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<400> 645
acgtcngtng tnckgaarta raa

23

<210> 646
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 646
atcgacaagc cnttcytnat gsc

23

<210> 647
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 647
acgtccgtsg trcggaagta gaactg

26

<210> 648
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 648
acgtcsgtsg trcggaagta gaactg

26

<210> 649
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (20)..(20)
<223> n represents a modified base

<220>
<221> modified_base

<222> (20)..(20)
<223> i

<400> 649
gtcctatgcc tcaracwcn gagcac

26

<210> 650
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<400> 650
ttacggaaca tytcaacacc ngt

23

<210> 651
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<400> 651
tgacgaccac cntcytcytt yttca

25

<210> 652
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<400> 652
ccwayagtny knccnccytc yctnata

27

<210> 653
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<400> 653
gayttcatna araayatgat

20

<210> 654
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<400> 654
tacaaratyk gnggtatygg

20

<210> 655
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<400> 655
ccrataaccnc mratyttgta

20

<210> 656
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 656
aattaatggc tgcagttgay ga

22

<210> 657
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 657
ttgtccacgt tcgatrctt ca

22

<210> 658
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 658
gatytagtcg atgatgaaga att

23

<210> 659
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<400> 659
gctttttgng tttcwggttt rat

23

<210> 660
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 660
gtagaattga ggacggtagt tag

23

<210> 661
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 661
gtagaaytgt ggwcgatart trt

23

<210> 662
<211> 832
<212> DNA
<213> Corynebacterium diphtheriae ATCC 27010

```
<400> 662
cggcgcaatc ctcgttggtg ctgccaccga cggcccaatg cctcagaccc gtgagcacgt 60
tctgctcgct cgccagggtc gcgttcctta catcctcggt gctctgaaca agtgcgacat 120
ggttgatgat gaggaatca tcgagctcgt cgagatggag atccrtgagc tgctcgctga 180
gcaggattac gacgaagagg ctccaatcat ccacatctcc gcaactgaagg ctcttgaggg 240
cgacgagaag tggacccagt ccatcatcga cctcatgcag gcttgckatg attccatccc 300
agacccagag cgtgagaccg acaagccatt cctcatgcct atcgaggaca tcttcacccat 360
caccggccgc ggtaccgttg ttaccggccg tgttgagcgt ggctccctga aggtcaacga 420
ggacgtcgag atcatcggtt tccgcgagaa kgctaccacc accaccgtta ccggtatcga 480
gatgttccgt aagcttctcg actacaccga ggctggcgac aactgtggtc tgcttctccg 540
tggcgtaaag cgcgaagacg ttgagcgtgg ccagggttgt gttaagccag gcgcttacac 600
ccctcacacc gagttcgagg gctctgtcta cgttctgtcc aaggacgagg gtggccgcca 660
caccaccatt ttcgacaact accgcccaca gttctacttc cgcaccaccg acgttaccgg 720
tggtgtgaag cttcctgagg gcaccgagat ggtcatgcct ggcgacaacg tcgacatgtc 780
cgtcaccctg atccagcctg tcgctatgga tgagggcctg cgcttcgcta tc 832
```

```
<210> 663
<211> 1192
<212> DNA
<213> Candida catenulata ATCC 10565
```

```
<400> 663
aacggcgagc aagacttggt gttggagggt tctcagcact tgggtgagaa caccgtgcgt 60
accattgcca tggacggtag cgaggggttg gtgagaggta ccgctgtcac tgacaccggg 120
gctcccattc cgggtcccgt tggtcagggt accttgggcc ggatcatcaa cgttgctcgg 180
gagcccatcg acgagcgtgg tcccattccag tgcaagcaga gaaaccccat tcacgccgag 240
cccccgctct tcaccgagca gtccgtcgag gctgaggtgt tggagaccgg tatcaagggt 300
gtcgacttgt tggctcccta cgcccggtgg ggtaagattg gtcttttcgg tgggtgccgg 360
gtcggtaaga ccgtgttcat ccaggagttg attaacaaca ttgccaaggc ccacgggtgg 420
ttctccgtgt tcaactggtg cggtgagcgt actcgtgagg gtaacgactt gtaccgtgaa 480
atgaaggaga ccggtgtcat caacttgagg ggcgactcca aggtggccct ggtgttcgg 540
cagatgaacg agcccccggg ggctcgtgcc cgtgtcgcct tgaccgggtt gaccattgcc 600
gagtacttcc gtgacgagga aggccaggac gtgttggtgt tcgttgacaa ctttttcaga 660
ttcaccacag ccggttccga ggtgtcggcg ttgttgggtc gtatcccctc cgccgtcgg 720
taccagccca ctttggccac cgacatgggt ttgttgagg agagaattac caccaccaag 780
aagggttccg tcacctctgt gcaggccgtg tacgtccctg ccgatgactt gactgacctt 840
gcccccgcca ccactttcgc tcaacttggac gccaccaccg tgggtgcgag agtcgagatt gttggacgtc 900
gagttgggta tctaccccg cgtcgacccc ttggactcca agtcgagatt ctcaggagtg cttgcaggcc 1020
gaggttggtg gccaggagca ctacgacgtc gccaccgggt tccaggagtg acgagttgtc cgagcaggac 1080
tacaagtcgt tgcaggacat cattgccatt ttgggtatgg acgagttgtc cttcgctgtc 1140
aagttgaccg tcgagagagc ccgtaagatc cagcgtttct tgtcgcagcc cttcgctgtc 1192
gccgaggttt tcaactggtat ccccggtaga ttggtgagat tgcaggacac cg
```

```
<210> 664
<211> 29
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> Description of Artificial Sequence:
Oligonucleotide
```

```
<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base
```

```
<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base
```

```
<220>
<221> misc_feature
```

<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<400> 664
aayatgatna cngngcngc ncaratgga

29

<210> 665
<211> 1377
<212> DNA
<213> *Saccharomyces cerevisiae*

<400> 665
atgggtaaag agaagtctca cattaacggt gtcggtatcg gtcagtgcga ttctggtaag 60
tctaccacta ccggtcattt gattttacaag tgtgggtggta ttgacaagag aaccatcgaa 120
aagttcgaaa aggaagccgc tgaattaggt aagggttctt tcaagtacgc ttgggttttg 180
gacaagttaa aggctgaaag agaaagaggt atcactatcg atattgcttt gtggaagttc 240
gaaactccaa agtaccaagt taccgttatt gatgctccag gtcacagaga ttcatcaag 300
aacatgatta ctggtacttc tcaagctgac tgtgctatct tgattattgc tgggtggtgtc 360
ggtgaattcg aagccggtat ctctaaggat ggtcaaacca gagaacacgc tttgttggct 420
ttcaccttgg gtggttagaca attgattggt gctgtcaaca agatggactc cgtcaaattg 480
gacgaatcca gattccaaga aattgtcaag gaaacctcca actttatcaa gaagggtggt 540
tacaacccaa agactgttcc attcgtccca atctctggtt ggaacggtga caacatgatt 600
gaagctacca ccaacgctcc atggtacaag ggttgggaaa aggaaaccaa ggccggtgtc 660
gtcaagggtg agactttggt ggaagccatt gacgccattg aacaaccatc tagaccaact 720
gacaagccat tgagattgcc attgcaagat gtttacaaga ttggtggtat tggtagctgtg 780
ccagtcggta gagttgaaac cggtgtcatc aagccaggta tgggtgttac ttttgcccca 840
gctggtgtta ccaactgaagt caagtccgtt gaaatgcac acgaacaatt ggaacaaggt 900
gttccaggtg acaacgttgg tttcaacgtc aagaacgttt ccgttaagga aatcagaaga 960
ggtaacgtct gtggtgacgc taagaacgat ccaccaaagg gttgcgcttc tttcaacgct 1020
accgtcattg ttttgaacca tccaggtcaa atctctgctg gttactctcc agttttggat 1080

tgtcacactg	ctcacattgc	ttgtagattc	gacgaattgt	tggaaaagaa	cgacagaaga	1140
tctggtgaaga	agtttgaaga	ccatccaaag	ttcttgaagt	ccggtgacgc	tgctttgggc	1200
aagttcgttc	catctaagcc	aatgtgtgtt	gaagctttca	gtgaataccc	accattaggt	1260
agattcgctg	tcagagacat	gagacaaact	gtcgtgtcgc	gtgttatcaa	gtctgttgac	1320
aagactgaaa	aggccgctaa	ggttaccaag	gctgctcaaa	aggctgctaa	gaaataa	1377

<210> 666
 <211> 1536
 <212> DNA
 <213> *Saccharomyces cerevisiae*

<400> 666						
atggttttgc	caagactata	tactgctaca	tcccggtgctg	cttttaaagc	agccaaacaa	60
tccgctccgc	ttctatccac	ttcgtggaaa	agatgtatgg	cctcagctgc	tcaatctact	120
ccaatcaccg	gtaaagttac	cgctgtcatt	ggtgccattg	ttgacgttca	ttttgaacaa	180
tcagagtttg	ccgctatttt	gaacgcttta	gaaattaaaa	cacctcaagg	taagttgggt	240
ttggaagttg	ctcaacattt	gggtgaaaac	actgtcagaa	ccattgctat	ggatgggtacc	300
gaaggttttg	tccgtgggtg	aaaggttctt	gacactgggtg	gccctatctc	cgtcccaggt	360
gggagagaaa	cttttagggag	aatcatcaac	gttatcggtg	aacctattga	tgaagagggt	420
ccaattaaagt	ccaaactaag	aaagccaatt	cacgcagacc	ctcctagttt	tcgagaacaa	480
tctacttcgg	ctgaaatttt	ggaaacaggt	atcaaagtcg	tcgatctatt	agctccttat	540
gccagagggtg	gtaagatttg	tcttttcggg	ggtgcagggtg	tcggttaagac	tgtgttcatt	600
caagaattga	ttaacaatat	cgccaaggcc	catggtgggt	tttccgtttt	cgccgggtgt	660
ggtgaaagga	ccagagaggg	taatgacttg	taccgtgaaa	tgaaggaaac	tggagtcatt	720
aactttggaag	gtgaatccaa	ggtcgcctta	gttttcgggtc	aaatgaacga	acctccagga	780
gccagagcca	gagtcgcttt	aactggtttg	acgatcgctg	aataatttcag	agatgaagaa	840
ggtcaagacg	tcttgttggt	tatcgacaat	atcttttagat	ttactcaagc	tgggttcagaa	900
gtctctgccc	ttttgggtcg	tattccatct	gccgtcggtt	atcaaccaac	tttggccact	960
gatatgggtc	tcttacaaga	aagaattacc	accacaaaga	agggttctgt	cacttctgtg	1020
caagccgttt	atgttccagc	cgatgattta	acagatccgt	ctccgtccac	atcttttgcc	1080
catttggacg	catcatccgt	cttgtcaaga	ggtatttcag	aattaggtat	ttaccttgca	1140
gtggatccat	tggattctaa	atcaagggtta	ttggatgccg	ccgttgctcg	tcaagaacat	1200
tatgacgtcg	cctccaaggt	tcaagaaact	ttacagacct	ataaatcttt	acaagatatc	1260
attgctatatt	tgggtatgga	tgaattgtcc	gaacaagata	aactaactgt	cgaagggggc	1320
agaaagattc	aaagattctt	atctcaacca	tttgcgtcgc	ccgaagtctt	tactgggtatc	1380
ccaggtaaat	tagtgagatt	aaaggacacc	gttgccctcg	tcaaagccgt	tttgggaaggt	1440
aaatacgata	atataccaga	acatgctttc	tatatggttg	gtggtattga	agatgttggt	1500
cgtaaagctg	aaaagttagc	ccgtgaagcc	aactag			1536

<210> 667
 <211> 1293
 <212> DNA
 <213> *Trypanosoma cruzi* strain Y

<400> 667						
cggaaggcgt	gccgcgggtg	ttaactgctt	tggatgtggt	ggaaaaactt	ggccgtgacg	60
agcccttgac	acttgaaatt	gtacagcact	tggacgccca	caccggccgt	tgcattgcga	120
tgcagacgac	agatctgctt	aagctgaaat	cgaaggtagt	ctcgagtggc	gggaacattt	180
ctgtgcctgt	gggtcgggag	acacttggca	gaatcttcaa	tgtgctgggc	gatgccattg	240
accagcgcgg	ccatgttgga	gagaagcaac	gcatgcctat	tcacgctgtg	gcaccaaagt	300
tggcggatca	ggcggcagag	gacaccattc	tcacaacggg	tatcaagggtg	attgatctga	360
ttttgcccta	ctgcaagggt	gggaagattg	gtcttttttg	tgggtgctggc	gtgggcaaga	420
cggttattat	catggaactt	attaacaacg	ttgccaaagg	ccatgggtggg	ttctccgtct	480
ttgcgggtgt	tgggtgaacgc	acgcgtgagg	ggacggatct	ttacctggag	atgatgcaat	540
ccaaagtatt	tgacctgaag	ggtgactcga	agtgtgtggt	ggtgtatggt	cagatgaacg	600
agcctccggg	tgcccgtgct	cgtgtggcgc	agtctgcctt	gacaatggcc	gagtacttcc	660
gtgatgtgga	agggcaagac	gtgttgcttt	ttatcgacaa	cattttccgc	ttacgcagg	720
caaactctga	ggtgtcagcg	ctgttgggtc	gtattccgcg	tgccgtcggc	taccagccta	780
cccttgctga	ggatcttggg	cagttgcagg	agcgcattac	gtccacgaca	aaaggttcca	840
ttacctctgt	gcaggtctgt	tacgtgccag	ccgatgatat	taccgacctt	gcgccagcaa	900
cgaccttttc	ccacctcgat	gccacgacgg	tcttggacgg	tgccgttgcc	gaatccggca	960
tttaccgccg	tgtcaaccga	ctggagtggt	cgtcgcgtat	catggaccgg	gatgtaatca	1020
gcgttgacca	ctacaacgtg	gcgcaggatg	tgggtgcagat	gcttaccgaag	tacaaggagc	1080
tgcaggatat	cattgcgggtg	cttggcattg	atgagctcag	tgaggaggat	aaacttatcg	1140

tggaccgtgc gcgtaagggtg acaaagtttc tctcccagcc tttccagggtg gcgagggtgt 1200
 ttactggcat gacaggccac tacgtgcagc tggaggagac cattgagtct ttttccggcc 1260
 tgttgatggg cacatatgat caggtgccgg aga 1293

<210> 668
 <211> 1191
 <212> DNA
 <213> *Corynebacterium glutamicum*

<400> 668
 gtggcaaaagg cgaagttcga gcgtaccaag cccacgtaa acatcggcac catcgggtcac 60
 gttgaccacg gtaagaccac caccaccgcg gctatcacca aggttctggc tgacacttac 120
 cctgagctca acgaggtttt cgccttcgac tccatcgata aggtcctcga ggagaaggag 180
 cgtggcatca cgatcaacat ctcccacgtt gagtaccaga ctgaaaagcg ccactacgca 240
 cacgttgacg ctccaggcca cgccgactac atcaagaaca tgattaccgg cgctgctcag 300
 atggacggcg caatcctcgt tgttgctgct accgacggcc caatgcctca gaccggtgag 360
 cacgttcttc ttgctcgcca ggttggcggt ccttacatcc tcgttgctct taacaagtgc 420
 gacatgggtt aggatgagga aatcatcgag ctctcgaga tgggaagtctg tgaacttctt 480
 gctgagcagg actacgacga agaggctcca attgttcaca tctccgctct gaaggctctt 540
 gagggcgacg agaagtgggg caagcagatc cttgagctca tgcaggcttg cgatgacaac 600
 atccctgacc cagttcgtga gaccgacaag ccattcctca tgcctatcga ggacatcttc 660
 accatcaccc gtcgtggcac cgttggtacc ggtcgtggtg agcgcggtag cctgaacgtg 720
 aacgatgatg ttgacatcat cggcatcaag gagaagtcca cctccaccac cgttaccggt 780
 atcgagatgt tccgtaagct tcttgactcc gctgaggctg gcgacaactg tgggtctgctt 840
 ctccgtggta tcaagcgcca agatgttgag cgtggccagg ttatcgtaa gccaggcgct 900
 tacacccttc acaccgagtt cgagggctct gtctacgttc tgtccaagga tgaagggtggc 960
 cagccacccc cattcttcga caactaccgt cctcagttct acttccgcac caccgacgtt 1020
 accggtgttg tgaagcttcc agagggcacc gagatggta tgcctggcga caacgtcgac 1080
 atgtccgtca ccctgatcca gcctgtcgct atggacgagg gcctgcgttt cgctatccgc 1140
 gaaggctccc gcaccgttgg cgctggctgt gtcaccaaga tcatcaagta a 1191

<210> 669
 <211> 1383
 <212> DNA
 <213> *Escherichia coli*

<400> 669
 atggctactg gaaagattgt ccaggtaatc ggcgccgtag ttgacgtcga attccctcag 60
 gatgccgtac cgcgcgtgta cgatgctctt gaggtgcaaa atggtaatga gcgtctggtg 120
 ctggaagtcc agcagcagct cggcgccggt atcgtacgta ccatcgcaat gggttcctcc 180
 gacggtctgc gtcgcggtct ggatgtaaaa gacctcgaac acccgattga agtcccgta 240
 ggtaaagcga ctctgggccc tatcatgaac gtactgggtg aaccggtcga catgaaaggc 300
 gagatcgggt aagaagagcg ttgggcgatt caccgcgcag cacttctcta cgaagagctg 360
 tcaaactctc aggaactgct ggaaaccggt atcaaagtta tgcacctgat gtgtccgttc 420
 gctaaggggcg gtaaagtgtg tctgttcggt ggtgcgggtg taggtaaaac cgtaaacatg 480
 atggagctca ttcgtaacat cgcgatcgag cactccggtt actctgtggt tgcgggctga 540
 ggtgaacgta ctctgagggg taacgacttc taccacgaaa tgaccgactc caacgttatc 600
 gacaaagtat ccctgggtgta tggccagatg aacgagccgc cgggaaaccg tctgcgcgtt 660
 gctctgaccg gtctgacat ggctgagaaa ttccgtgacg aaggctcgtg cgttctgctg 720
 ttctgtgaca acatctatcg ttacaccctg gccggtagcg aagtatccgc actgctgggc 780
 cgtatgcctt cagcggtagg ttatcagccg accctggcgg aagagatggg cgttctgcag 840
 gaacgtatca cctccaccaa aactggttct accactccg tacaggcagt atacgtacct 900
 gcggatgact tgactgaccc gtctccggca accactttg cgcaccttga cgcaaccgtg 960
 tctactgagcc gtcagatcgc gtctctgggt atctaccggc ccgttgaccc gctggactcc 1020
 accagccgtc agctggaccc gctggtgggt ggtcaggaac actacgacac cgcgctggc 1080
 gttcagtcga tcctgcaacg ttatcaggaa ctgaaagaca tcatcgccat cctgggtatg 1140
 gatgaactgt ctgaagaaga caaactggtg gtagcgcgtg ctctgtaagat ccagcgcttc 1200
 ctgtcccagc cgttcttcgt ggcagaagta ttcaccggtt ctccgggtaa atacgtctcc 1260
 ctgaaagaca ccatccgtgg ctttaaaggc atcatggaag gcgaatacga tcacctgccg 1320
 gagcaggcgt tctacatggt cggttccatc gaagaagctg tggaaaaagc caaaaaactt 1380
 taa 1383

<210> 670

<211> 1410

<212> DNA

<213> *Helicobacter pylori* NCTC 11638

<400> 670

atgaaagcga	tggaaggtaa	aatcattcag	gttttaggcc	cggtaggtaga	tgtggagttt	60
gaatcctatc	tgccggcgat	ttttgaagca	ctagacatta	attttgaagt	taatggcggt	120
caaaaatctt	tagttttaga	ggtggcagcc	catttggttg	gtaatcgggt	gcgagcgatt	180
gctatggata	tgacagaagg	cttagtgctg	aaccaagccg	tcaaagctcg	tggcaaaatg	240
attgaagtgc	ctgtgggcga	agaagtgtta	gggcgtat	ttaatgttgt	gggcgagagc	300
attgataatt	tagagccgct	taagccgtcc	ttacttggc	ccattcacag	aaaagcccct	360
agttttgagc	agcaaagcac	taaaacagaa	atgtttgaaa	ccggtattaa	agtcattgac	420
ttgctcgcgc	cttattctaa	gggcggtaaa	gtaggcttgt	ttggtggggc	tggcgtaggc	480
aaaacggtga	tcattatgga	gcttatccac	aatgtggctt	ataagcataa	cgggtattcg	540
gtgtttgcag	gtgtggggga	gcgcaccaga	gaagggaacg	atctgtat	tgagatgaaa	600
gaagggggcg	ttttagacaa	agttgcgttg	tgctatgggc	aatgaatga	gccaccaggt	660
gcaagggaatc	gcatcgcat	caccggcttg	acgatggcgg	agtatttccg	tgatgaaaag	720
ggcttagatg	tgttgatgtt	tattgataac	atctttagat	acgctcaaag	cgggtgcggaa	780
atgagcgcgc	tattaggccg	tatcccttca	gcggtggggg	atcagcccac	gctagccggg	840
gaaatgggga	aacttcaaga	gcgtatcgct	tccactaaaa	atggctctat	cacttcgggt	900
caagcggtgt	atgtgccagc	agacgacttg	actgaccacg	cccctgcttc	ggtgtttgcg	960
catttagatg	cgactacggt	gttgaataga	aagatcgctg	aaaaagggat	ttatccggcg	1020
gtggatcctt	tggattccac	ttcaaggatt	ttaagccctc	aatgattgg	cgagaagcac	1080
tatgaaatcg	ccaccggtat	ccagcaagtt	ttgcaaaaat	acaaggattt	gcaagatatt	1140
attgcgattt	tgggattgga	cgaattgagc	gaagaggata	aaaaaacggt	tgaaagggcc	1200
agaaaaattg	agaagttttt	atcccagccg	tttttgtg	ctgaagtgtt	tacaggaagt	1260
cccggtaagt	atgtgactct	ccaagagact	ttagagggct	ttggagggat	tttagagggc	1320
aaatacgatc	acattcctga	aaacgcgttt	tacatggtgg	gcagcattca	agaggtttta	1380
gaaaaagcta	aaaacatgaa	aatctcctaa				1410

<210> 671

<211> 1401

<212> DNA

<213> *Clostridium acetobutylicum* DSM 792

<400> 671

atgccagaac	atgtaggtaa	aattgttcag	gtaataggac	ctgttgtgga	tattaaat	60
gatgcagaga	accttcctga	catctataat	tccatagaaa	tagatatggg	agataataaa	120
aaatcatttg	ctgaagtgtg	acaacatgta	ggagatgaca	tagtaagaac	aatagcaatg	180
gaaggtactg	acggattaaa	aagagggaatg	gaagcagtta	acactggtaa	accaatatct	240
gtaccagttg	gagaaaaatgt	tttaggacgt	ctttttaatg	ttttaggtca	gacaatagat	300
gaagcaggag	acatgaatgc	tgataagtat	tatccaattc	atagaccagc	tccaaccttt	360
gaagaacaat	cagttcaacc	agaaatgttt	gaaacaggta	ttaaggttat	agatttactt	420
gtcccatatc	aaaaggggtg	aaaaatcggt	ttgttcgggtg	gtgccgggtg	tggtaaaaca	480
gttcttattc	aggaacttat	aaataatata	gcaaaagaac	acgggtggatt	atcagtattc	540
acaggtgttg	gagaaagaac	aagagaaggt	aatgaccttt	attatgaaat	gaaagattca	600
ggagttataa	ataaaacagc	tctagtattt	ggtcagatga	atgaaccacc	tggcgctaga	660
atgagagttg	ctttaacagg	acttacaatg	gctgaatatt	ttagagacaa	aggtcaagat	720
gtgcttctat	ttatagataa	tatattcaga	tttacacaag	ctggttcaga	ggtttcagct	780
ttacttggtg	gaatacctag	tgccgtttgt	tatcagccaa	cacttgcaaa	tgaaatgggt	840
gctcttcaag	agagaataac	atcaacaaaa	caggggttcaa	tcacatccgt	tcaggctgta	900
tatgttccctg	ctgatgacct	tacagaccga	gctccagcaa	caacatttac	gcatcttgat	960
gcaacaacag	ttctttcaag	agaaatatca	aacttaggaa	tatatcctgc	agttagtcct	1020
cttgaatcaa	cttcaagaat	acttgatcca	agaattggtg	gagaagagca	ttatgaagtt	1080
gctaacaagg	ttaaacatat	acttgaaaga	tatcaagaac	ttcaagatat	catagctata	1140
cttggtgttg	atgaactttc	agatgaggat	agattgttag	ttggaagagc	aagaagagta	1200
cagagattct	tatctcaagc	ttttagtgtt	gctgaacaat	ttacaggaat	gaaaggtcag	1260
tttgtacctg	taaaagatac	tataagaagt	tttaaagaaa	tattagatgg	taagtgtgat	1320
gatcttccag	aagctgcatt	tttatttgca	ggaacaatag	aagatgtaaa	agaaaaagct	1380
aaaaaatgta	tggaaagcta	a				1401

<210> 672

<211> 1509

<212> DNA

<213> *Cytophaga lytica* DSM 2039

<400> 672

```

atgtctaaag ttacaggtaa agtttcccaa attattggcc cagttataga tgtggagttc 60
caagcagggg tagatcttcc aaaaatttat gattcattag aaattaaaaa agcagatgga 120
tcaatttttg ttttggaagt acaatcacac attggtgaga acacagtaag aactatatct 180
atggattctt ctgatgggtt aagtcgtgga gcagaggtta atgcaacagg aagcgctata 240
caaatgccag ttggagatga cgtttacgga cgtttattta acgtaattgg agacgctatt 300
gatggtcttg ggaatttacc aaaatctggt aaagatgggt tgccaatata cagagaggca 360
ccaaaatttg aagacttatc tacttctaca gaagtattat ttacagggtat taaagtaatt 420
gaccttattg agccttatgc aaaagggtgg aagattgggt tatttggagg tgccggagta 480
ggtaaaacag tattaattca ggaattaatt aacaacattg caaaagggtc cggtggactt 540
tctgtatttg ctggtgtagg tgagcgtact cgtgagggtg acgatttact acgtgagatg 600
ttagagctcg gtattattaa atacggagat gacttttatgc actctatgga agaagggtgg 660
tggtgattat cttaaagttg taaatctgta atgaaagatt cttaaagcaac ctttgtattt 720
ggacaaatga atgagccacc aggagcacgt gcacgtggtt cattatctgg ttttaactatt 780
gcagaatatt tccgtgatgg agcaggtgaa ggtcaaggta aagatgtact tttctttgtg 840
gataacattt tccgttttac acaagctggt tctgagggtat ctgcattact tggtcgtatg 900
ccatctgcgg taggtttacca accaacatta gcaacagaaa tgggtgctat gcaagagcgt 960
attacatcaa caaaaagagg ttctattaca tctgtacagg cggtttacgt acctgcggat 1020
gatttcaacg atccagcacc ggcaactacc tttgctcact tagatgcaac aacgggtattg 1080
tctcgtaaaa ttgcagagtt aggtattttac ccagcggtag atccattaga ttctacttct 1140
agaatcttag ctccagaaat tttaggaaaa gatcactact cttgtgcaca acgtgtaaaa 1200
gagttgttac aacgtttataa agaattacaa gatattattg ctatccttgg tatggaagaa 1260
ttatctgagg aagataaaat ggcagttggg agagcaagac gtgtacaacg tttcttatct 1320
cagccttttc acgtagcaga gcaatttaca ggtcttaaaag gtgttttagt agatatcaag 1380
gatactatta aaggatttaa tatgattatg gatggtgaat tagatcactt accagaatct 1440
gcatttaacc ttaaagggtac tattgaagaa gctatagaag caggagaaaa aatgcttgct 1500
gaagcataa 1509

```

<210> 673

<211> 819

<212> DNA

<213> *Ehrlichia risticii* strain HRC-IL

<400> 673

```

cctaaaatat atgatgcatt atatgtaaaa ctagataatg aaaatttgtg tttagaagtt 60
tcacaaatta ttggagataa tgttgttaga tgtattgcaa tgggagctac ttatggatta 120
aatcgtgggt tagaagtagt ttgttcagga aatccaattc aggttcctgt aggtgaacaa 180
gttttaggta gaatgtttta tgttgttggg aaaacaattg acaatcttga atcttttagat 240
gataaaaaata taaaaatgat gccaatccat cgaaatccac catcatttga agagcaatcc 300
aatgaaattg aaattttttg aacaggcatt aaagtatttg atttattaat tccatatgct 360
aaagggtgga agattggatt atttgggtgga gcaggggttg ggaaaacggg tcttgttcaa 420
gaattaattc acaatatcgc aaaaggatcat ggtggtctat ctgtttttgc tggagttggg 480
gaaagaactc gtgaaggtaa tgacttgtat tatgaaatga ttgaagggtg agttatagat 540
aaaacagcct tagtggtttg gcaaataaat gaacctcctg gcgcaagaat gcgcgtagca 600
ttaactgctt taacaatggc tgaatatattc cgtgatgttc aaaaccaaga tgttttgtta 660
tttattgata atatcttttag atttacacaa gctggttagt aagtttcagc attattagga 720
agaatgccat ctgctgttgg ttatcaacca actttggcat atgaaatggg attgtttaca 780
gaaagaatca cttccactaa aagtgggtct ataacatct 819

```

<210> 674

<211> 840

<212> DNA

<213> *Vibrio cholerae* ATCC 25870

<400> 674

```

agagcgaagt accaagtgtt tacgatgctc tgaatgttgt ggattccaaa gaacgtctgg 60
ttctggaagt tcaacagcag ctaggcgggt gcgtgatctg cgctatcggt atgggtagct 120
cggatgggtt acgtcgtgga atgacagtac aaaacactgg cgctccaatt tcagtaccag 180
taggtactaa aaccctaggt cgtatcatga acgtgcttgg tgatgcgatt gacgaacgtg 240
gcgacattgg cgcagaagag gtgtactcga ttcaccgtcc tgctccaagc tacgaagaac 300
agtctagtgc aactgaactt ttggaaacgg gtgttaaggt tatcgacctg atctgtccgt 360
ttgcgaaagg cggtaaaatc ggtctgttcg gtggtgcggg tgtaggtaag accgttaaca 420

```

tgatggaact	tatcaacaac	atcgcgctac	agcactcagg	tttgctcagta	tttgctgggg	480
taggtgagcg	tactcgtgag	ggtaacgact	tctaccacga	aatgcaggaa	gcgggcgttg	540
taaacgttga	acaaccagaa	ctgtcgaag	tagcgatgg	ttacggtcag	atgaacgagc	600
caccaggcaa	ccgtctgcgt	gtagcactga	ctgggtctgac	tatggcggaa	aagttccgtg	660
atgaaggccg	tgacgtactg	ctgtttatcg	acaacatcta	ccgttacacc	ctagcgggaa	720
cggaagtatc	tgctctgctt	ggccgtatgc	cttcagcgg	aggttaccaa	ccaacactgg	780
ctgaagagat	gggtgttctg	caagaacgta	tcacgtcaac	caaaaaaggt	tctatcacct	840

<210> 675
 <211> 828
 <212> DNA
 <213> *Vibrio cholerae* ATCC 25870

<400> 675						
cggcggtatc	ctagttgtag	cggcaactga	cgggtccaatg	ccacaaactc	gtgagcacat	60
cctgctgggt	cgccaagtag	gtattcctta	catcatcgta	ttcatgaaca	agtgtgacat	120
ggttgacgat	gaagagcttc	tagagctgg	agagatggaa	gttcgtgagc	tgctgtctga	180
gtacgatttc	ccaggtgatg	acctgccagt	aatccaaggt	tcagcactag	gcgcgctaaa	240
cggcgaagca	cagtgggaag	cgaagattgt	tgagctagca	gaagcactgg	atacttayat	300
tccagagcca	gagcgtgcag	tagacatggc	attcctgatg	ccaatcgaag	acgtattctc	360
aatccaaggt	cgtggtacag	tagtaactgg	ccgtatcgag	cgcggcatcc	tgaaagtggg	420
tgacgaagta	gcatcgttg	gtatcaaaga	gacagtaaaa	acgacctgta	caggtgtaga	480
gatgttccgt	aagctgcttg	acgaaggctc	tgcaaggtag	aacgtagggt	cactrctacg	540
tggtactaag	cgtgaagaag	tagagcgtgg	tcaagtactg	gcgaagccag	gttcaatcac	600
accacacact	aagttcgaat	cagaagtata	cgtactgtca	aaagatgaag	gtggccgtca	660
tactccattc	ttcaaagggt	accgtccaca	gttctacttc	cgtacaactg	acgtaacagg	720
cagcattgag	ctaccagarg	gcgtagaaat	ggtaatgcca	ggcgacaacg	tgaagatgg	780
tgtagacctg	attgcaccaa	tcgcgatgga	cgaagggtcta	cgcttcgc		828

<210> 676
 <211> 1298
 <212> DNA
 <213> *Leishmania enriettii* ATCC 50120

<400> 676						
cttctcggat	ggcgtgccgc	cgggtgctgac	ggcgtgggac	gtgacggagg	aactcggg	60
cgacgagccg	ctgacgctag	agatcgtgca	acacttggac	gcgcacaccg	gccgctgcat	120
tgcgatgcag	acgacggacc	tactgaagct	gaagtcgaag	gtcgtgtcga	ccggcgggaa	180
catctctgtg	cctgtggg	gcgagacgct	tggccgcac	ttcaacgtac	tgggcgacgc	240
gattgaccag	cgcggccccc	tgggcgagaa	gatgcgcatg	gcgatccacg	cggaggcgcc	300
gaagctggcg	gaccaggcgg	cggaggacac	gatcctgacg	accggcatca	aagtgatcga	360
tctgatcctg	ccgtactgca	agggcggcaa	gatcgggtctg	ttcggcgggtg	ccggtgtggg	420
gaagactgtg	atcatcatgg	agctgatcaa	caacgtcgcg	aaggggccacg	gtggcttctc	480
cgtgttcgcc	ggcgttgggg	agcgcacccg	cgaggggacg	gatctgtacc	tggagatgat	540
gcaatcgaag	gtgatcgacc	tgaaagggtga	gtcgaagtgt	gtgcttgtgt	acgggcagat	600
gaacgagccc	ccgggtgcgc	gcgcgcgcgt	tgccgagctc	gcgctgacga	tggccgagta	660
cttccgcgac	gtggagggcc	agaacgtgct	gctgttcac	gacaacatct	tccgcttcac	720
gcaggcgaac	tccgaggtgt	cagcgtgctg	ggccgcgcatc	cccgcgcgtg	tgggctacca	780
accgacgctt	gcggaggatc	tcggcatggt	gcaggagcgc	atcacgtcga	cgacgaagg	840
gtcgatcacg	tctgtgcagg	cgggtgtacgt	gcctgcggat	gatatacacg	atcccgcgcc	900
ggcgacgaca	ttctcgcacc	tggacgcgac	gacggtgctg	gaccgcgcgg	tggcggagtc	960
tggcatctac	cccgcgggtca	acccactgga	gtgcgcgtcg	cgtatcatgg	accctgatgt	1020
gatcgacgtg	gatcactaca	acgttgcctga	ggacattggt	cagatgctga	ccaagtacaa	1080
ggagctgcag	gatatacattg	cgggtgcttgg	tatcgacgag	ctgagcgagg	aggacaaggt	1140
tgtggtggac	cgtgcgcgca	aggtgacccg	gttcctgtca	cagccgttcc	aggttgcgga	1200
ggtgtttact	ggcatgacag	gccattacgt	acagctgagc	gacacggtgg	agtcgttctc	1260
cggtttgctg	atggggctcgt	acgaccagat	tccggaga			1298

<210> 677
 <211> 1083
 <212> DNA
 <213> *Babesia microtti* strain Persing-1

```

<400> 677
caagctcaag tctgagcgtg agagaggtat tactattgac attactctct ggaaatttga 60
gaccagaaa tacgagtaca ctgtcataga cgcacctggt catcgtgact ttatcaaaaa 120
tatgattact gggacttcac aagccgacgt tgctatgctt gtcgttcctg ctgaatctgg 180
cggattcgag gctgcttttt ccaaagaagg tcagacccgt gaacacgcct tactagcctt 240
cacacttggc gtcaaacaga tgattgttgc tattaacaaa atggattctt gtcagtacaa 300
ggaggatcgt tatatggaaa ttttcaagga agtacagcag tacttgaaga aggtgggtta 360
caaagttgaa agcgtgccgt ttgttgctat ttcaggattc cacggtgaca acatgggtga 420
aaaatctact aacatgcctt ggtataaggg taagaccctc gtagaggcac ttgatcaaat 480
ggagcctcca aaacgtccgg tcgaaaaacc tcttagattg cccctgcagt cagtctataa 540
aattggagggt attggtacgg taccagtcgg aagggtcgaa acaggacaac tgaaagcagg 600
aatgatcatt acttttgccc ccactggttt gaccactgaa tgtaaactctg ttgaaatgca 660
tcacgaggtt gtggaagtgg ctagccccgg tgataacgtt ggatttaatg tcaagaatgt 720
gtctgttaag gatattaaga gaggaaatgt ggcttcggat tcgaaaaatg acccagccaa 780
ggaagctacc tctttctctg cacaagtcac tgactcaaat caccctggta ccatcaaggc 840
cggttactca cctgtggttg attgccatac tgcccacatt gcttgcaaat tcgaatctct 900
agacactagg attgacaagc gtactggcaa gactttggaa gaaaatccta agactattaa 960
gaatggtgac gctgccatgg tgactatgaa accaaataaa cccatggttg tggaaacttt 1020
caccgactac gccccgttgg gccggttcgc cgtgcgtgat atgcgcaaaa ccgttgccgt 1080
cgg                                     1083

```

```

<210> 678
<211> 551
<212> DNA
<213> Cryptococcus neoformans strain Lev-12

```

```

<400> 678
tgtgtcatt caggagctca ttaacaacat tgccaaggct cacggtgggtt actctgtctt 60
cactgggtgtc ggtgagcgaa ctctgtaggg taacgacttg taccacgaaa tgagggagac 120
tggtgttatac aaccttgagg gtgactccaa ggctgctctt ggtgagttct ttttttctt 180
caggctaatt agtcgatgac gtgggcccctg actaaaactg tttcttccag tcttcggtca 240
gatgaacgag cccctggag cccgtgcccg agttgccctt actggtttga ccattgccga 300
gtacttccgt gacgaggaag gccaggatgt gttgcttttc attgacaaca ttttccgatt 360
caccagggcc ggttccgagg tgtctgcctt gctcggtcgt atccccctctg ccgtcggtta 420
ccagccact ctttccaccg acatgggtgg tatcgaggag cgaatgtagg ttgcattctc 480
tgtgatttta cggcaagcct tgactttttt tttctagtag caccaccaag aagggttcca 540
ttacctccgt c                                     551

```

```

<210> 679
<211> 552
<212> DNA
<213> Cryptococcus neoformans ATCC 44104

```

```

<400> 679
tgtgtcatt caggagctca ttaacaacat tgccaaggcc cacggtgggtt actccgtctt 60
caccgggtgtc ggtgagcgaa ctctgtaggg taacgacttg taccacgaaa tgagggagac 120
tggtgttatac aaccttgagg gtgactccaa ggctgctctt ggtgagttct ttttttggg 180
agctaattag tcgatgacgt gggcccctgac caaaaccgtt tctttcagtc ttcggtcaga 240
tgaacgagcc cctggagcc cgtgcccagag ttgctcttac tggtttgacc attgccgagt 300
acttccgtga cgaggaaggc caggatgtgt tgcttttcat tgacaacatt ttccgattca 360
cccagggccgt ttccgagggt tctgccttgc tcggtcgtat cccctctgcc gtcggttacc 420
agcccactct ttccaccgat atgggtggta tgcaagagcg aatgtaagtt gcattttttg 480
tgattttacg gcaagtcttg acttacattt ttttctagca ccaccaccaa gaagggttcc 540
attacctccg tc                                     552

```

```

<210> 680
<211> 1018
<212> DNA
<213> Cunninghamella bertholletiae ATCC 42115

```

```

<400> 680
tctccctgct attttaaacg ctcttgaagt taaggatcat gctgggtgggc gtcttgttct 60
tgaagttgct caacacttgg gtgaaaacac tgtacgtact attgctatgg atggtactga 120

```

```
aggtaagttt atttttagat gatcataaat aattgatcat aatgataaaa aaaaaagaag 180
aagaagaaca ggatgtatat aatgggttaat aaataatatt ttcataattgk atataactat 240
ttaatctggt tttttttctt catgattata tatatatatg tmctaataatc taatatgaac 300
cttttttata aaattaatca ggtcttggtc gtgggtcaaaa ggttggtgat actgggtgctc 360
ctattacat tctgttggt aaggaagttc ttgggtcgat catcaacgtt attgggtgaac 420
ccattgatga acgtgggtcct attaaggcca agtctcaccg tgctattcac gctgaagctc 480
cagaattcgt tgatcaatct cctactcccg aaattcttga aactgggtatt aagggtgtcg 540
atttattagc tccttatgct cgtgggtggt agattgggtc tttcgggtggt gctgggtgtag 600
gtaaaactgt cttgattcaa gaacttatta acaacattgc taaagcccat ggtgggttact 660
ctattttctg tgggtgttggt gaacgtactc gtgaaggtaa cgatttatac cacgaaatga 720
tggaactgg tgtcattaaa cttgaagggt actccaagtg tgctcttgta ttcgggtcaaa 780
tgaacgaacc tcctgggtgct cgtgcccgtg ttgctttaac tggtttaacc attgctgaat 840
acttcctgta tgaagaagg caagatgtgt tacttttcat tgataacatt ttcggtttca 900
ctcaagctgg ttctgaagta tctgccctt taggtcgat tccatctgct gtaggttacc 960
aaccacttt atctactgat atgggtggtg tgcaagaacg tattactact accaagaa 1018
```

<210> 681

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (3)..(3)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (6)..(6)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (12)..(13)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (15)..(15)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (18)..(18)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base

<222> (6)..(6)

<223> i

<220>

<221> modified_base

<222> (12)..(13)

<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 681
ggnssnttyg gnnsnggnaa rac

23

<210> 682
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<400> 682
gtnacnggyt cytcraartt nccncc

26

<210> 683
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base

<222> (15)..(15)

<223> i

<220>

<221> modified_base

<222> (21)..(21)

<223> i

<220>

<221> modified_base

<222> (24)..(24)

<223> i

<400> 683

gtnacnggnt cnswnawrtc nccncc

26

<210> 684

<211> 3267

<212> DNA

<213> Candida tropicalis

<400> 684

atggctgggtg	cttttagaaaa	cgcaagaaaa	gaaattaaac	gtcttttcatt	agatgacacc	60
aatgaatccc	aatatgggtca	aatctattct	gtttccgggc	cggttgttat	tgccgaaaac	120
atgattggat	gtgccatgta	cgaattgggt	aaagtgggtc	atgataattt	agttggggaa	180
gttattagaa	ttaatgggtga	taaagcaacc	attcaagttt	atgaagaaac	tcaggggggc	240
actgttgggtg	atccagtttt	aagaactggg	aaaccattat	ctgttgaatt	aggtcctggg	300
ttaatggaaa	ctattttatga	tggtattcaa	agacctttta	aagccattaa	agatgaatcc	360
caatctattt	atatcccaag	aggtattgat	gttccctgct	tatcaagaac	tggtcaatat	420
gatttcactc	cagggtcaatt	gaaagtgggt	gatcatatca	ctggtgggga	catttttggg	480
tctattttatg	aaaactcttt	attggatgac	cataagattt	tggtacctcc	aagagcaaga	540
ggtactatta	cttctattgc	tgaagccggg	tcttataatg	ttgaagaacc	agttttggaa	600
gttgaatttg	atggtaagaa	acataaatac	tctatgatgc	atacatggcc	agttagagtt	660
ccaagaccag	ttgctgaaaa	attgactgct	gatcatccat	tggtgaccgg	tcaaagagtc	720
ttggattctt	tattcccatg	tggtcaagggt	ggtactactt	gtatcccagg	ggcttttggg	780
tggtgtaaaa	ctgttatttc	tcaatctttg	tccaaattct	ccaactctga	tggtattatc	840
tatgttgggt	gtttcactaa	aggtactcaa	gtcatgatgg	ctgatgggtg	cgacaaatct	900
attgaatcta	ttgaagtgtg	tgacaaaagtc	atgggtaaaag	atgggatgcc	aagagaagtt	960
gttggcttac	caagaggtta	tgatgatatg	tacaagggtc	gtcaactttc	tagtactaga	1020
cgtaatgcta	aatccgaagg	cttgatggat	ttcactgttt	ctgctgatca	taaacttatc	1080
ttgaaaacta	aacaagatgt	caagattgct	acacgtaaaa	ttggtggcaa	cacctatact	1140
ggtgttactt	tctatgtttt	ggaaaagact	aagactgggt	ttgaattagt	taaagccaag	1200
actaaagttt	tcggtcatca	tatccatggg	caaaatggcg	ctgaagaaaa	agctgctact	1260
tttgcgtgctg	gcattgactc	taaagaatac	attgatggga	tcattgaagc	tagagattat	1320
gtacaagtgg	atgaaattgt	caagaccagc	accactcaaa	tgatcaaccc	agttcatttt	1380
gaatctggta	aactcggtaa	ctggttacac	gaacacaagc	aaaacaaatc	acttgcctca	1440
caattggggt	acttgttggg	tacttgggct	ggtattggaa	atgttaaate	ttctgctttc	1500
accatgaact	ccaaagatga	tgttaaaatta	gctacaagaa	ttatgaacta	ctcttcaaaa	1560
ttgggcatga	cttgttcttc	tactgaatcc	ggtgaactca	atgtcgctga	aaacgaagaa	1620
gaatttttca	ataaccttgg	tgctgaaaag	gatgaagctg	gtgatttcac	ttttgatgaa	1680
tttaccgatg	ctatggatga	attgactatc	aatgttcatg	gtgcagctgc	aagcaagaag	1740
aacaatttgt	tgtggaatgc	tttgaaatct	cttggtttca	gagccaagtc	tactgatatt	1800
gtcaagagta	ttcctcaaca	tattgctggt	gatgatattg	ttgtcagaga	atctttgatt	1860
gccggttttag	ttgatgctgc	tggtaatggt	gaaaccaaata	ccaatgggtc	tattgaagct	1920
gttgttagaa	cttcttttcag	acatgtcgct	agaggctctg	tcaagattgc	tcattctttg	1980
ggtattgaat	catctattaa	tattaaagat	actcacattg	atgctgctgg	tggttagacaa	2040
gaattttgctt	gtattgtcaa	tttgactggg	gctccacttg	ctgggtgttct	ttctaaatgt	2100
gcacttgcaa	gaaaccaaac	tccagttgtc	gagacccagt	ttgttcaac	ttgttcaac	2160
tttgatttga	tcaaatctgc	aaaagaaaac	tattatggta	ttactttggc	tgaagaaaact	2220
gatcatcaat	tcctttttatc	caacatggcc	ttggtgcaca	actgtgggtga	acgtgggtaat	2280
gagatggctg	aagtttttgat	ggaattccca	gaattgttta	ctgaaatttc	tggttagaaaa	2340
gaaccaatta	tgaaacgtac	cacttttggtt	gccaatactt	ctaatatgcc	agtcgctgcc	2400
agagaagctt	ctattttatc	tggtattaca	ttggctgaaat	atttcagaga	tcaagggtaag	2460
aatgttttcta	tgattgctga	ttcttcttca	cgttgggctg	aagcttttgag	agaaatttct	2520
ggtagattgg	gtgaaatgcc	tgctgatcaa	ggtttcccag	cttatttggg	tgctaaattg	2580

gcttctttct	atgagcgtgc	cggtaaagcc	actgcttttg	gttcaccaga	tagagtgtgt	2640
tcagtttcta	ttgttgctgc	tgtttctcca	gctgggtgtg	atctctctga	tccagttact	2700
acttctactt	tgggtattac	tcaagtttcc	tgggggttgg	ataagaaatt	ggcccaaaga	2760
aaacatttcc	catctattaa	caccagtgtt	tcttattcta	aatacaccaa	tgttttgaac	2820
aaatactatg	attccaacta	tccagaattc	ccacaattga	gagacaaaat	tagagaaatt	2880
ttatctaata	ctgaagaatt	ggaacaagt	gttcaattag	ttggtaaata	tgcattgtct	2940
gattctgata	agattacttt	agatgttgct	accttgatta	aagaagattt	cttgcaacaa	3000
aatggttatt	cttcatatga	tgcattctgt	ccaatttgga	agacttttga	tatgatgaga	3060
gcattttatt	catattatga	tgaagcacia	aaagcaattg	ccaatgggtg	tcaatgggtc	3120
aaattagctg	aaagtactag	tgatgttaaa	catgctgttt	cttcagctaa	attctttgaa	3180
ccatcaagag	gtcaaaaaga	aggtgaaaaa	gaatttggag	atttattaac	cactatctcc	3240
gaaagatttg	ctgaagcttc	agaataa				3267

<210> 685
 <211> 1782
 <212> DNA
 <213> *Enterococcus hirae* ATCC 9790

<400> 685						
ttgcaaatg	gaaaaatcat	aaaagtctcc	ggctctctcg	ttatggcaga	aaatatgtca	60
gaagcaagta	ttcaagacat	gtgttttagt	ggagatttag	gagtcacg	cgaaatcatt	120
gagatgcgtc	aagatgtggc	gtctattcaa	gtatatgaag	aaacttcagg	aattgggtccc	180
ggagaacctg	ttcgtttcac	tggggaagca	ctatctgttg	agctaggacc	aggaatcatt	240
tcacaaatgt	ttgacgggat	tcaaagacca	ctggatacat	ttatggaagt	gactcaaagt	300
aacttcttag	gacgtggggg	ccaattacca	gctttagatc	atgagaaaac	atgggtggtt	360
gaagcgacaa	tcgaagaagg	aacagaagta	agtgtgggag	acatcattgg	gtacgtggat	420
gaaacgaaga	tcattcagca	caaaatcatg	gtccctaata	gtatcaaagg	aactgtacaa	480
aaaattgaat	ctggatcatt	tacgatcgat	gatccgattt	gtgtgatcga	aacggaacaa	540
ggcttaaaaag	agctgacgat	gatgcaaaaa	tggccagtac	gtcgtgggtc	accaatcaaa	600
caaaaatttaa	atccagatgt	accgatgatc	accggtcaaa	gggtcattga	cacgtttttc	660
ccagtaacta	aaggaggagc	ggcagccgtt	ccagggtccg	ttgggtgcagg	gaagacagtt	720
gtgcaacacc	agattgctaa	gtgggtcggac	gtagatctag	tggtttacgt	tggtttgtggg	780
gaacgaggaa	atgaaatgac	ggatgtcgtc	aatgaatttc	ctgaactgat	cgatccaaat	840
acaggcgagt	ctttgatgga	acgaactgtg	ttgatcgcta	atacatcgaa	catgccagta	900
gctgctcgag	aagcttctat	ttatacggga	atcacgattg	ccgagtactt	ccgtgacatg	960
gggtatgatg	tagcaatcat	ggcagattcc	acttctcgtt	gggcagaagc	actgctgtga	1020
atgagcggac	gtttagaaga	aatgcctggg	gatgaagggt	atcccgccta	tctgggctct	1080
cgtctagctg	aatactatga	acgttcagga	cgtgtcattg	ctctaggctc	tgaccaacgt	1140
gagggcagta	tcactgccat	cagtgcgggt	tctccttctg	gtggagatat	ctctgaacca	1200
gtgactcaaa	ataccttacg	tgtggtgaag	gttttctggg	gattagattc	tagtcttgct	1260
caaaaaagac	atthttccat	gattaaactg	atccaaagtt	actcattata	ttcaacagaa	1320
gttggcagat	atatggatca	aatcttacaa	caggattggg	ctgatatggt	aactgaaggc	1380
atgctggatc	tgcaagaaga	agaacaatta	aatgaaatcg	tgcgcttggt	agggatcgat	1440
tcgctttctg	ataacgatcg	cttgaccctt	gaagtagcaa	aatcgattcg	agaagactat	1500
ttacaacaaa	atgcttttga	tgatgtagat	acgtttactt	caagagaaaa	acaattcaac	1560
atgtttgaaag	ttattttgac	ttttgggaaa	gaagctcgaa	aagccttata	gttgggagcg	1620
tacttcaatg	aatcatgga	aggtacagta	gcggtcagag	aacgcattag	tcggagcaag	1680
tatattccag	aagaagagtt	agccaaaatt	agtagtataa	atgaagaaat	caaagaaacg	1740
atccaattga	ttgtttcaga	aggagggatg	accgatgatt	aa		1782

<210> 686
 <211> 1781
 <212> DNA
 <213> *Chlamydia pneumoniae* strain CWL 029

<400> 686						
cagggacatg	ttatagaagc	ttatggaaac	ttgttacgtg	tacgctttga	cggatatggt	60
agacaagggt	aagttgcata	tgtcaacgta	gataataacct	ggttaaaagc	agaagtgatt	120
gaagttgctg	atcaagaagt	caaggttcag	gtattttgaag	atacacaagg	cgcgtgtcga	180
ggagctcttg	ttacgttttc	aggacatctt	ttagaagccg	agttagggcc	tggtttgctt	240
cagggcattt	tcgatggact	tcaaaatcgt	cttgaggtgc	tagctgaaga	tagttctttc	300
ttgcagagag	gcaagcatgt	taatgctatt	tctgatcata	atttatggaa	ttatactccc	360
gtagcttctg	ttggggatag	tttaagacga	ggagatcttc	taggaacagt	acctgaagga	420
cgatttactc	ataagattat	ggttcctttt	tcttgctttc	aagagggttac	cctgacttgg	480

gtaatttctg	aaggaacct	taatgctcat	actgtggtcg	caaaagctcg	agatgctcag	540
ggtaaagaat	gtgcctttac	tatggtgcaa	agatggccga	tcaaacaagc	ttttattgaa	600
ggagagaaga	tccctgcgca	taagattatg	gatgtgggtt	tgcgaatctt	agatacgcaa	660
attccagtat	tgaagggggg	aacttttctgt	accccaggac	cttttggtgc	agggaaaaca	720
gtcttacaac	accatctttc	taagtacgct	gctgtagata	ttgtgatttt	gtgtgctgac	780
ggagagcgtg	ctggtgaagt	tgttgaggta	ttacaagagt	tccctcatct	tatcgacccc	840
cataccggaa	agtctttaat	gcacagaaca	tgtattattt	gtaacacatc	atccatgcct	900
gtggctgccc	gagagtcttc	gatctattta	ggagtgcaga	ttgcagaata	ctatcgccag	960
atgggactag	atattctgct	tttagctgat	tctacatccc	gatgggcaca	agcccttaga	1020
gagatttcgg	gacgtcttga	agaaatccct	ggagaggaag	catttcctgc	atacctgtct	1080
tctagaatag	ctgcttttta	tgagcgagga	ggagctatca	ccacgaaaga	tggttctgaa	1140
ggatctttta	ctatatgtgg	tgcggtgtct	cctgcaggag	gaaactttga	agaaccagtc	1200
actcaatcta	catttagctgt	agtcggagcg	ttctgtggtc	tttcaaaagc	acgagctgac	1260
gcacgtaggt	atccttcaat	agaccctttg	atctcttggt	caaaatattt	gaaccaggta	1320
ggacaaattt	tagaagagaa	ggtttcaggc	tgggggtggt	ctgtgaaaaa	agcagcacag	1380
tttctagaga	aaggttcaga	aatcggcaag	cgtatggaag	ttgtcagtga	agaaggggtt	1440
tctatggaag	acatggaaat	ctacttaaa	gcagaacttt	atgatttttg	tkatctccag	1500
cagaacgcat	tcgatcctgt	ggactgttat	tgtccttttg	agagacagat	agagttattt	1560
tcattaatca	gtcgtatttt	tgatgctaaa	tttgtttttg	atagtcctga	tgatgcaaga	1620
agctttttcc	ttgagctgca	gagcaagatt	aagacattaa	atggcctgaa	atttctttca	1680
gaggaatatc	atgagagtaa	agaggtcata	gttagactgt	tggaaaaaac	aatggtacaa	1740
atggcgtaag	gatatgcaaa	caatctacac	aaaaataact	g		1781

<210> 687

<211> 1758

<212> DNA

<213> Halobacterium salinarum

<400> 687

atgagtcagg	ctgaagcaat	cactgacacc	ggcgaaatcg	agagcgtgag	cggctcgggtc	60
gtgaccgcca	cgggcctcga	cgcgcagatg	aacgacgtcg	tctacgtggg	cgacgagggt	120
ctgatgggcg	aggatcatcga	gatcgaaggc	gacgtaacca	ccatccaggt	ctacgaggag	180
acgtccggca	tcgggcccggg	ccagcccgtc	gacaacacgg	gcgaaccgct	caccgtggac	240
ctgggcccgg	ggatgctgga	ctccatctac	gatggtgtgc	agcgtccact	ggacgtcctc	300
gaagacgaga	tgggggctgt	cctcgatcgc	ggtgttgacg	cacccggcat	cgacctcgac	360
accgactggg	agttcgagcc	caccgtcgag	gcgggcgacg	aggctcgggc	cggcgatgtc	420
gtcggcaccg	tcgacgaaac	ggtcagcatc	gaacacaagg	ttctgggtgc	cccccgagtc	480
gacggcggcg	aagtcgtcgc	cgtcgaatcc	ggcaggttca	ccgtcgacga	cacggctcgtc	540
gagttggaca	ccggcgagga	gatccagatg	caccaggagt	ggccgggtccg	ccgccagcgc	600
cccaccgtcg	acaagcagac	gccgacggag	ccgctggtgt	cgggccagcg	catcctcgac	660
ggcctgttcc	cgatccgcaa	aggcgggacg	gccgcgatcc	cggggccggt	cgggtccggg	720
aagacgggtc	cccagcagtc	cctcgcgaa	ttcgccgacg	cggacatcgt	tgtctacatc	780
ggctgtggtg	agcgcggcaa	cgagatgacg	gaagtcatcg	aggacttccc	ggagctgccc	840
gacccccaga	ccgggaaccc	gctgatggcc	cgcaccacgc	tcacgcgcaa	cacgtcgaac	900
atgcccgttg	ccgggctgta	gtcctgcatt	tacacgggaa	tcaccatcgc	ggagtactac	960
cgcgacatgg	gctacgacgt	ggcgctgatg	gccgactcca	cctcgcggtg	ggcgagggcc	1020
atgcccggaga	tctcctcgcg	actcgaggag	atgcccgggc	aggaggggta	tcccgcgtac	1080
ctggccgccc	gcctctcgga	gttctacgag	cgcgcgggct	acttcgagaa	cttcaacggg	1140
accgagggct	ccatctcggg	catcggtgcg	gtgtcgccgc	cggcggggga	cttctccgag	1200
ccggtcaccc	agaacacgct	gcgcacgtg	aagacgttct	gggctgctga	ctcggaacctc	1260
gccgagcgcc	ggcacttccc	ggcgatcaac	tgggacgagt	cctacagcct	ctacaaggac	1320
caactcgacc	cgtggttcac	ggacaacgtc	gtcgacgact	gggcccagca	gcgccagtcg	1380
gcggtcgaca	tctcgcagca	ggaatccgaa	ctcgaagaga	tcgtgcagct	cgtcgggaag	1440
gacgcgctgc	ccgaggacca	gcagctcacg	ctggaagtcg	cgcgggtacat	ccgcgaggcg	1500
tggctccagc	agaacgcgct	ccacgacgtg	gatcgctact	gcccgcgccga	gaagacgtac	1560
gccatcctct	ccggcatcaa	gacgcttcac	gaggagtcct	ttgaggcggt	ggacgccgggt	1620
gtgccagtcg	aggagatcac	gtcgatcgac	gccgcgccgc	gcctgaatcg	tctcggcacg	1680
acgcccagcg	acgagcacga	ggcggaggtc	gcggagatca	aacagcagat	taccgagcag	1740
cttcgggagc	tctactga					1758

<210> 688

<211> 3118

<212> DNA

<213> Homo sapiens

```

<400> 688
gaattccggc agctgactag tcttgtgatt ggggtcctgg gctgataaaa tcattccaaa 60
tgacgagcac attgataaaac acgtccgatg aggaccggga gtccaaattc ggctttgttt 120
ttgccgtatc tggacctgtg gtgacagctg aacgaatggc cggttctgct atgtacgaac 180
tgggtgcgtgt cggttattat gaactggctg gagagatcat ccggttggag ggtgacatgg 240
caacaatcca agtatacgaa gacacctcag gtgtgacagt aggcgatccc gtgctgcgca 300
caggcaagcc gctgtccgtg gaactgggac ccggaatcat gggcagcatc ttcgacggta 360
tccagcgacc gctgaaggat atcaatgaac tgtcaaatag tatctacatc ccgaaagggtg 420
tcaatgtgcc tggcctgagt cgcactgcac agtgggactt cagtcccgtc agtgtcaagg 480
ttggaagcca cattactggt ggtgacctgt acggtttggt ccacgaaaat actctggtga 540
aacacaagtt gctgctgccg ccccggtgcca agggaactgt cacgtacatt gcagaacctg 600
gaaactacac agttgatgat gttgtcctgg agacagaatt tgacggcgag cgatcaaagt 660
tcaccatgct gcaagtgtgg cctgtacgtc agcccaggcc tgttacagaa aagttgccag 720
ctaactaccc cctccttact ggccagcgtg tgctcgactc cctattcccg tgtgtccagg 780
gtggaacaac agctattcct ggggccttcg gatgtggcaa gactgtaata tcacagtctt 840
tgtcaaaaata ctcaaactcc gatgtaatta tctatgtagg ttgtggtgag cgaggtaagt 900
aaatgtcaga agtactcagg gatttccgcg agttgtcgtt ggagattgat ggtgtgactg 960
aatcaatcat gaagagaaca gccctggctg caaacacatc aaacatgcct gtggctgctc 1020
gagaagcatc tatctacaca ggtattacac tgtcagaata cttcagggac atgggttaca 1080
atgtatccat gatggctgac tcaacttcac gatgggccga agctcttcga gaaatctcag 1140
gtcgattggc tgaaatgcct gccgacagcg gttatcccgc ctacctaagg gcacgacttg 1200
ccagtttcta cgagcgtgcc ggccgtgtga agtgcctggg taaccagac agggagggtc 1260
ccgtgagtat agtgggcgcc gtgtcgccgc ccggtggaga cttctcagat cccgtgacga 1320
cggccacact aggtatcgct caggtgttct ggggtctcga caagaaactt gccagcgaa 1380
agcacttccc atccatcaac tggtcatctt ccagagtttg tcccactcgc atacatgcgt gctctggatg 1440
acttctacga caagaatttc cctgaaattg tctcagttgt cggtaaagct tcattggcag 1500
tgcaggagga gatcacactt gaggttgcca aactattaaa ggatgatttc ctgcaacaga 1620
aaactgacaa accatattgac cgtttctgcc cattctacaa gacagtagga atgtgaaaa 1680
acagctattc tttctacgat atgtctcgcc atgcagttga atctactgct cagagcgaga 1740
atatgattgc ttggaatggt attagagatt ctatggcaca tattctgtat cagctttcct 1800
acaagatcac ccatgaaatt caaggatcca gtcaaggatg gagaagcgaa gatcaaggca gactttgagc 1860
cctctctgtg tgtacgtgag attgccgtct gtaacactgga ggattaaagt ggtagctgcc 1920
tgaagtcagt cagaagggtg tgtcacattt ggcaagctct gtagggttgc cgagtggcat 1980
cgggtgctaga cacctgagca ttcctttgcc acataaagac taaagcaggt ggaatttcag 2040
ttgtaaaaag ctggttccat tgggtgctaag attatgttgt gcccttttct gcttctcaca 2100
ttccaacaga ggaatttact tccagttttc ttccattttc ctctctcatt taagtgtcgg 2160
tacagaggca ataactctgat aactctgtac cgtcacttac aagcagggag aattcatttg tcccaggact 2280
tattacaaat cccattatct ctgtgcacca gtatgtatgt acacaccgta ctgcagtatt 2340
ccctcttgtg tgtacgtgag attgccgtct ttactcattg tgtcacgtag caagtgtgca 2400
aactgccatc cattgtccta tttattcaca taactagttt tctttgcatt tccagtgttg 2460
caaattgtgt ttagaaaatt atgccatcga gactgggtcg acctcacatt gtaactcagt 2520
atttacacac acgtttactt gctacagaaa tgtagaaaaa ataattgttg tatattgaaa 2580
gtacaagtga caaagttgca tttaaaatgg tgaatgtatt ttatatttct tttgtagaca 2640
caagagttaa tgcattttgc ttaattggag tgtatgtaaa cctaaaatag cagtttgtgc 2700
acaaattatg tatatgtgaa atggagatgg tttctaattt gctgattgat tgccagtatt 2760
aatttaacaa actgtagttg tgggatgtag tgggaagatt ttttttttcc tataaaaattg 2820
gtggatgtat gtgtcggaga ttttgattgt atgtgtaaaa tagtgatccc agtaactgta 2880
aagcttttaga atacagttac tgactgtata tttgtacagg tgttgttact ttaagaattt 2940
tattgacaca aagggtgaaag tctattattg tattgtaatg tttaaagcat ttaaggttta 3000
aaaatcctac ttctgtgtat aaatgttacc attcctcata taacataact gtgtagaaat 3060
acagtcaact tcatgttcat tagcatttca ctgttgtcac ataaattatg cccggaat 3118

```

<210> 689

<211> 1836

<212> DNA

<213> Plasmodium falciparum strain 3D7

<400> 689

```

atgacaaaag ttgctgttga aaaagaggaa ccaggagttg tttataagggt ggctggttca 60
ttagttattg ctgagaatat gagtggaaact cgtatgtacg agttagctaa agtaggatgg 120
aataaaattg ttggagaaat tattagatta gaaaggaatt atgcataat acaagtttat 180
gaagataact caggtttatc tgtaggagac cctgttataa aaacaggaaa tgctttatca 240
gtcgaattgg gtcctgggat tttagataat atttatgatg gtattcaaag accattagaa 300

```

agaatagcaa	atgtgtgtgg	tgatgtatat	atatataaag	gtattgatat	gacatcttta	360
gatcatgata	aacaatggca	attttatgct	gataagaaat	taaaattaaa	tgatattggt	420
actgggtggag	atatcttttg	atgtgttgat	gaaaataaat	tatttaaaga	acacaaaatt	480
atggctccac	ctaagtctaa	agggaggctt	acatatattg	ctccagatgg	atcatatact	540
ttaaaagata	aaatatttga	attagaatat	caaggaaaaa	aatatacata	tggtttatct	600
catttatggc	ctgttcgtga	tcctagacct	gttttagaaa	aggtaacagg	ggatacttta	660
ttattaacag	ggcaaagagt	tttagattcg	ttatttccaa	cagttcaagg	aggacttgt	720
gctattcctg	gtgcatttgg	ttgtggaaaa	acttgtgttt	ctcaggcctt	atcaaaaatat	780
tctaatagtg	aagttattat	atatgttagga	tgtggtgaaa	gaggtaatga	aatggctgaa	840
attttatccg	actttcctga	attaactact	aaagtagata	atgaagatgt	aggattattg	900
caaagaacgt	gttttagttgc	taatacttct	aacatgcctg	tcgctgcaag	agaagctagt	960
atttatacag	gtattacttt	atgtgaatat	ttccgtgata	tgggttataa	tgctaccatg	1020
atggctgata	gtacaagtag	atgggcagaa	gccttaagag	aaatttcagg	acgttttagct	1080
gaaatgcctg	cgatagtggt	ttatccagct	tatttaggtg	ctagattagc	ttccttttat	1140
gaacgtgcag	gaaaagtcaa	atgtattggt	tctccatctc	gtataggatc	cattacaatt	1200
gtgggtgctg	tgtctccacc	agggtgtgat	ttctctgacc	ctgtaactac	agcaaccatg	1260
tctattgttc	aagcattttg	ggggttagat	aaaaaactag	ctcaaagaaa	acatttccct	1320
tctgttaatt	ggtctacatc	cttttcaaag	tatgtcagac	aattagaaca	atactttgat	1380
aattttgatc	aagatttctt	atctttaaga	caaaaaatta	gtgatatttt	acaacaagaa	1440
agtgacttga	atgatattgt	tcaactagta	ggaaaggatt	cattatcaga	agacaaaaaa	1500
gttggttatgg	aagtagccaa	aattattaga	gaagattttc	ttcaacaaaa	tgcatgtgtt	1560
gattatgatt	atatgtgccc	attacaaaaa	acagttggta	tgatgagaat	tatttggcac	1620
ttttatgctc	aatgcttaag	aacattacaa	gaatatgact	caagagaaaag	aaaaattggt	1680
tggggatcta	tataataac	attaagacca	actataaata	aaattacaca	tatgaaattt	1740
gaaaacccaa	aaaattcaga	tgaatatttc	aaaaagttat	ttaaggcact	tgaagaagaa	1800
ataacagtag	gtttaagaaa	cttcatggaa	aatga			1836

<210> 690

<211> 3216

<212> DNA

<213> *Saccharomyces cerevisiae* strain X2180-1A

<400> 690

atggctgggtg	caattgaaaa	cgctcgtaag	gaaataaaaa	gaatctcatt	agaagaccat	60
gctgaatctg	aatatgggtg	catctattct	gtctctgggtc	cggtcgatcat	tgctgaaaaat	120
atgattgggtt	gtgccatgta	cgaattgggtc	aagggtcggtc	acgataacct	gggtgggtgaa	180
gtcattagaa	ttgacggtga	caaggccacc	atccaagttt	acgaagaaac	tgccaggcctt	240
acggctcggtg	accctgtttt	gagaacaggt	aagcctctgt	cggtagaatt	gggtcctggt	300
ctgatggaaa	ccatttacga	tggtattcaa	agacctttga	aagccattaa	ggaagaatcg	360
caatcgattt	atatcccaag	aggatttgac	actccagctt	tgataggac	tatcaagtgg	420
caatttactc	cgggaaagtt	tcaagtcggc	gatcatattt	ccggtgggtga	tatttacggt	480
tccgtttttg	agaattcgct	aatttcaagc	cataagattc	ttttgccacc	aagatcaaga	540
ggtacaatca	cttggattgc	tccagctggg	gagtacactt	tggtatgagaa	gattttggaa	600
gttgaatttg	atggcaagaa	gtctgatctt	actctttacc	atacttggcc	tgctcgtggt	660
ccaagaccag	tacttgaaaa	gttatctgct	gactatcctt	tgtaaacagg	tcaaagagtt	720
ttggatgctt	tgtttccttg	tggttcaaggt	ggtacgacat	gtattccagg	tgcttttggt	780
tgtggtaaga	ccgttatctc	tcaatctttg	tccaagtact	ccaattctga	cgccattatc	840
tatgtcgggt	gctttgccaa	gggtaccaat	gttttaattg	cggtatgggtc	tattgaatgt	900
attgaaaaca	ttgaggttgg	taataagggtc	atgggtaaaag	atggcagacc	tcgtgaggta	960
gtaaaattgc	ccagaggaag	agaaactatg	tacagcgtcg	tcagagaaaag	tcagcacaga	1020
gcccacaaaa	gtgactcaag	tcgtgaagtg	ccagaattac	tcaagtttac	gtgtaatgcg	1080
acccatgagt	tggttggttag	aacacctcgt	agtgtccgcc	gtttgtctcg	taccattaag	1140
ggtgtcgaat	attttggaag	tattactttt	gagatgggcc	aaaagaaaagc	ccccgacggt	1200
agaattgttg	agcttgtcaa	ggaagtttca	aagagctacc	caatatctga	ggggcctgag	1260
agagccaacg	aattagtaga	atcctataga	aaggcttcaa	ataaagctta	ttttgagtggt	1320
actattgagg	ccagagatct	ttctctgttg	ggttcccatg	ttcgtaaagc	tacctaccag	1380
acttacgctc	caattcttta	tgagaatgac	cactttttcg	actacatgca	aaaaagtaag	1440
tttcatctca	ccattgaagg	tccaaaagta	cttgcttatt	tacttggttt	atggattggt	1500
gatggattgt	ctgacagggc	aactttttcg	gttgattcca	gagatacttc	tttgatggaa	1560
cgtgttactg	aatatgctga	aaagtgtgaat	ttgtgcgcgc	agtataagga	cagaaaagaa	1620
ccacaagttg	ccaaaactgt	taatttgtac	tctaaagttg	tcagaggtaa	tggtattcgc	1680
aataatctta	atactgagaa	tccattatgg	gacgctattg	ttggcttagg	attcttgaag	1740
gacggtgtca	aaaatatccc	ttctttcttg	tctacggaca	atatcggtac	tcgtgaaaca	1800
ttcttctgctg	gtctaattga	ttctgatggc	tatgttactg	atgagcatgg	tattaaagca	1860
acaataaaga	caattcatatc	ttctgtcaga	gatgggttgg	tttcccttgc	tcgttcttta	1920

ggcttagtag	tctcgggttaa	cgcagaacct	gctaagggtg	acatgaatgg	caccaaaccat	1980
aaaattagtt	atgctatttta	tatgtctggt	ggagatgttt	tgcttaacgt	tctttcgaag	2040
tgtgccggct	ctaaaaaatt	caggcctgct	cccgccgctg	cttttgcacg	tgagtgccgc	2100
ggattttatt	tcgagttaca	agaattgaag	gaagacgatt	attatgggat	tactttatct	2160
gatgattctg	atcatcagtt	tttgcttgcc	aaccagggtg	tcgtccataa	ttgcggagaa	2220
agaggtaatg	aaatggcaga	agtcttgatg	gaattcccag	agttatatac	tgaaatgagc	2280
ggtactaaag	aaccaattat	gaagcgtact	actttggtcg	ctaatacatc	taacatgccg	2340
gttgacagcca	gagaagcttc	tatttacact	ggtatcactc	ttgcagaata	cttcagagat	2400
caaggtaaaa	atgtttctat	gattgcagac	tcttcttcaa	gatgggctga	agctttgaga	2460
gaaatttctg	gtcgtttggg	tgagatgcct	gctgatcaag	gtttcccagc	ttatttgggt	2520
gctaagttgg	cctcctttta	cgaagagacc	ggtaaagctg	ttgcttttagg	ttccccagat	2580
cgtactgggt	cgttttccat	cgttgctgcc	gtttcgccag	ccgggtggtga	tttctcagat	2640
cctgttacta	ctgctacatt	gggtatcact	caagtctttt	gggggttaga	caagaaattg	2700
gctcaaagaa	agcatttccc	atctatcaac	acatctgttt	cttactccaa	atacactaat	2760
gtcttgaaca	agttttatga	ttccaattac	cctgaatttc	ctgttttaag	agatcgtatg	2820
aaggaaattc	tatcaaagcg	tgaagaatta	gaacaagtgt	ttcaattagt	tggtaaatcg	2880
gccttgtctg	atagtataaa	gattactttg	gatgttgcca	ctttaatcaa	ggaagatttc	2940
ttgcaacaaa	atggttactc	cacttatgat	gctttctgtc	caatttggaa	gacatttgat	3000
atgatgagag	ccttcatctc	gtatcatgac	gaagctcaaa	aagctgttgc	taatgggtgcc	3060
aactgggtcaa	aactagctga	ctctactggg	gacgttaagc	atgccgtttc	ttcatctaaa	3120
ttttttgaac	caagcagggg	tgaaaaaggaa	gtccatggcg	aattcgaaaa	attgttgagc	3180
actatgcaag	aaagatttgc	tgaatctacc	gattaa			3216

<210> 691

<211> 1860

<212> DNA

<213> Schizosaccharomyces pombe strain 972 h-

<400> 691

atggcgggag	gaattgaact	ggccaagaag	gctatcagga	gcctcaaaaa	ttacgacgag	60
catgaaaacc	gatatggatc	tattttcagc	gtttctggtc	ctgtcgttgt	tgacgccaat	120
atgcttggat	gttcgatgta	cgaactcggt	cgcgttggtc	atgaagaact	agttgggtgaa	180
gtaattcgta	tccatcaaga	taaattgtact	attcaagtat	acgaagagac	gtccggtctc	240
actgttgggtg	atcctgtcca	acgcactgga	aagccattat	ctgttgaatt	aggtcctgggt	300
ttagctgaga	ctattttatga	tggtatccaa	cgtccgttaa	agcaaatttt	cgacaaatct	360
caaagtattt	atattcctag	aggtattaat	acagaatcac	ttaatcgtga	gcataagtgg	420
gatttcacac	caaataagga	tttacgcatt	ggcgatcatg	tatccgggtg	tgatgttttc	480
ggttctgtat	ttgaaaactc	tcttttcaat	gatcataaaa	ttatgttacc	ccctagagcc	540
cgtgggtaccg	tcacatatat	tgctgaagct	ggatcatacc	atgttgatga	aaaacttctt	600
gaagtcgagt	ttaatggcaa	gaaacattct	tttagtatgt	tgacatactg	gcctgtccgt	660
gctgctcgtc	cagttgcgga	caacttaact	gctaatacaac	ctttattgac	tggtcaacgt	720
gttttggatg	cgttataccc	ctgtgttcaa	gggtggcacta	ctgctatccc	cgggtgccctt	780
ggttgtggta	aaacagttat	ttcacaaatct	ctttctaagt	actctaattc	tgatttgatt	840
gtttacgtcg	gttgtgggtga	acgtggaaac	gaaatggcag	aagtgttaat	ggatttccca	900
gaactaacia	ttgatattaa	tggtaaacca	gagcccatta	tgaagcgta	tacattggta	960
gccaacactt	ctaactatgcc	tgtcgtctgt	cgtgaagctt	ccatttatac	cgggtattaca	1020
cttgctgaat	attatcgtga	tcaaggtaag	aacgtttcaa	tgatggctga	ttctacatct	1080
cgttgggctg	aagctttgcg	tgaattttct	ggctcgtttg	ctgagatgcc	tgccgattct	1140
ggttatcccc	cttatttggg	tgccaaattg	gcttcttttt	acgaacgtgc	tggtcgtgct	1200
cgttgcttgg	gaagtcctga	ccgtgaagga	acagtttcaa	ttgttggagc	tggttctcct	1260
ccgggtgggtg	atttttctga	tcctgttact	agtgaacact	tgggaattgt	tcaagtcttc	1320
tgggggttgg	acaagaaatt	ggcccaacgt	aaacactttc	cctcaatcaa	cacctctctt	1380
tcctattcta	aatacatcaa	tgctttgcaa	ccttggtatg	aggaaagagt	tccaggcttt	1440
aatactcttc	gtgatcaaat	caaacagatc	attcaacaag	aagattccat	gttggaattt	1500
attcagttgg	ttggtaagtc	ggctctttct	gaaacggata	aagttacttt	ggacatagcc	1560
ggtattatta	agaatgactt	cttacaacia	aacggttatt	ctgattacga	tcgctgttgc	1620
cctctttaca	agacttatca	tatgatgcga	aacatgattg	cttactacac	aaaggctaaa	1680
agtgcggttg	aaactggtag	cgttccttgg	tcaaagatta	aagaaagtac	ttcagatatc	1740
ttttatgagt	taacctcgat	gaaattcgaa	aaccctaattg	aaggcgagaa	ggaaatagtc	1800
gaacactatg	aaactctgca	caagaagatt	gaggacaagt	ttcacactct	gactgagtaa	1860

<210> 692

<211> 1833

<212> DNA

<213> Trypanosoma congolense strain IL3000

<400> 692

```

atgacgagcg ataaaaaccc ttacaaaaca gagcagcgca tggggggccgt gaaggccgtc 60
tccggggccag ttgtcattgc tgaaaacatg ggcggtagcg ctatgtatga gcttgtgcag 120
gtaggttcct tccgggttagt gggcgagatc attcgtctag agggcgatac cgccactatt 180
cagggtctatg aggaaacagg tggcctcact gtcggagacc cgggtgtactg tacgggtaag 240
cctctttcgc ttgagcttgg acctggaatc atgtctgaaa tatttgacgg tatccagcgg 300
cctcttgaca ccatctaccg catggtggaa aacgtgttta tccccagggg cgttcagggtg 360
aagtcactca atgaccagaa acagtgggac tttaagccat gcctgaaggt tggagatctt 420
gtgtctgggtg gtgatatcat tggctcagtg gtggagaact ctctcatgta caatcacagc 480
attatgattc cgcccaatgt gcggggccgt gttacttcca ttgttccttc aggaaattac 540
acctccaag atgacattat tgaattggaa tataatggga cagtgaatc actaaaactt 600
atgcatcgct ggccagtacg gaccccgctt cctgtggcgt caaaagaatc cggcaatcat 660
ccgcttctca ccggacagcg tgtgctcgat gctctctttc catccgtcca gggtggaaca 720
tgcgccatcc ctggcgctgt tggatgcgga aagacgggta tcagtcaggc tcttcgaag 780
ttctccaaca gcgacgctgt tatctatgtc ggctgcggcg agcgtgggaa tgagatggca 840
gaggtgctca tggacttccc cacactcacc accgttattg atggctcgtg ggagtcctc 900
atgaagcgta cctgcctggt ggcaaacacc tcaaatatgc ctgtcgctgc tcgtgaggcg 960
tctatttaca ctggcatcac tttagctgag tattatcggt atatgggcaa gcacattgct 1020
atgatggccg actctacctc tcgatgggct gaggctctcc gtgagatctc tggcgctctc 1080
gctgaaatgc ccgctgatgg tggttaccct gcgtacctca gtgcgctctc tgcttccttc 1140
tacgagcggt cgggcgctg gacatgcac ggtgggcca aacgcgaggg ctccgctacg 1200
atcggtgggt ccgtttctcc tcctggaggt gacttttctg acccagtgac gtccgctacg 1260
cttgggtattg tgcaagtctt ttggggctct gagaagcgct ttgcgcaacg taaacacttt 1320
ccttctgtta attggctcat ttctatttca aaatacctta atgctttgga gcccttcttc 1380
aacacgcttg acctgacta catgcgcctg cggtcagttg ctgcggagat ccttcagcgt 1440
gaggaagagt tgcaagaaat tgttcaactt gtcggtaagg actcactttc ggagtctgac 1500
aaaattattc tagaaacggc taaggttatt cgtgaagagt ttctccagca gaatgccttt 1560
acgccgtacg acaagtattg cccgccgtac aagacctgct ggatgctacg taacattgtc 1620
gcgttctacg aggagagcca gcgcgttgta gctgagtcgg ctggggaact taagattacg 1680
tggaactaca ttcgtgaaat gattcctcat atttaccagg gtttaactga gatgaagttc 1740
cgtgatcctc aggaggtgga ggaggccaac gtagaattct acagaaaaca aaatgaggaa 1800
attgtcagcg cattcgctc gctgctgcaa taa 1833

```

<210> 693

<211> 1758

<212> DNA

<213> Thermus thermophilus strain HB8

<400> 693

```

atgatccaag ggggtgatcca gaagatcgcg ggcccggcgg tgatcgccaa gggcatgctc 60
ggggcccgca tgtacgacat ctgcaagggt ggcgaagagg gcctcgtggg cgagatcatc 120
cgcctggacg gggacacggc cttcgtccag gtctacgagg acacctcggg cctaaagggt 180
ggggagcccg ttgtctccac gggccttccc ttggcggtgg agctcggccc cgggatgctg 240
aacggcatct acgacggcat ccagcgcccc ctggagcgca tccgggagaa gacggggatc 300
tacatcaccg ggggcgtggt ggtccacgcc ctggaccggg agaagaagtg ggcctggacg 360
cccatgggta agcccgggga cgagggtcgg ggggggatgg tcttgggcac ggtgcccag 420
ttcggcttca cccacaagat cctggtaccc ccggacgtgc ggggcggggt caaggagggt 480
aagcccgcg gggagtacac cgtggaggag cgggtgggtg tcttcgagga cggcaccgag 540
ctcaagatgt accacacctg gcccgttcgc cgggcgaggg ccgtgcaaa gaaagcttgac 600
cccaacaccc ccttcctcac ggggatgcgc atcctggacg tctcttcccc cgtggccatg 660
gggggcaccc ccgccatccc tgggcccctc ggcagcggca agaccgtgac ccagcagttc 720
ctggccaagt ggtccaacgc cgacgtggtg gtctacgtgg gctgcgggga gcgggggaa 780
gagatgaccg acgtgctcgt ggagtcccc gagctcaccg accccaagac ggggtgggccc 840
ttgatgcacc gcaccgtcct catcgccaac acctccaaca tgcccgtggc cgcccgcgag 900
gccagcatct acgtgggctg gaccatcgcc gagtacttcc ggcaccaggg cttctccgtg 960
gccctcatgg ccgactccac gagccgctgg gccagagctt tgccgcgagat ctctagccgc 1020
ctcaggagga tgcccggcga ggagggttac ccgccctacc tgcgcgccag gctcgccgcc 1080
ttctacgagc gggcgggcaa ggtcatcacc ctgggcggcg aggagggggc ggtgaccatc 1140
gtggggggcc tctccccgcc gggcggcgac atgtccgagc ccgtgaccca gtccaccttg 1200
aggatcggtg gggccttctg gcggcttgac gctccctgg ccttccgccc ccacttcccc 1260
gccatcaact ggaacggctc ctacagcctc ttcacctccg ccttgacccc ctggtaccgg 1320
gagaacgtgg ccgaggacta ccccagctc cgcgacgcca tctccgagct tttgcagcgg 1380
gaggcgggccc tccaggagat cgtccagctc gtggggccgg acgccctcca ggacgccgag 1440

```



```

cgccctcgta ttgaggtggg ccggatcatc cgcgaggact tcctgcagca gaacgcctac 1500
cacgaggtgg acgcctactg ctccatgaag aaggcctacg ggatcatgaa gatgatcctc 1560
gccttctaca aggaggcgga ggcggccatc aagcgggggg tttccataga cgagatcctg 1620
cagctccccg ttctggagcg catcggccgc gcccgctacg tgagcgagga ggagttcccc 1680
gcctactttg aggaggccat gaaggagatc cagggggcct tcaaggctgg cctaaagggg 1740
gagagatgga ccttctga                                1758

```

```

<210> 694
<211> 21
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

```

```

<220>
<221> misc_feature
<222> (7)..(7)
<223> n represents a modified base

```

```

<220>
<221> modified_base
<222> (7)..(7)
<223> i

```

```

<400> 694
cggcgcnatc ytsgttggtg c                                21

```

```

<210> 695
<211> 20
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

```

```

<400> 695
gtttcacgtg atgacgtaca                                20

```

```

<210> 696
<211> 26
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

```

```

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

```

```

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

```

```

<220>
<221> misc_feature
<222> (12)..(12)

```

<223> n represents a modified base

<220>

<221> misc_feature

<222> (21)..(21)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base

<222> (6)..(6)

<223> i

<220>

<221> modified_base

<222> (12)..(12)

<223> i

<220>

<221> modified_base

<222> (21)..(21)

<223> i

<400> 696

atnggncayr tngaycaygg naarac

26

<210> 697

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (3)..(3)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (6)..(6)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (9)..(9)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<400> 697
ccnacngtnc knccrccytc rcg

23

<210> 698
<211> 1185
<212> DNA
<213> Escherichia coli

<400> 698
gtgtctaaaag aaaaatttga acgtacaaaa ccgcacgtta acgttggtac tatcggccac 60
gttgaccacg gtaaaactac tctgaccgct gcaatcacca ccgtactggc taaaacctac 120
ggcgggtgctg ctctgtgcatt cgaccagatc gataacgcgc cggaagaaaa agctcgtggt 180
atcaccatca acacttctca cgttgaatac gacaccccgga cccgtcacta cgcacacgta 240
gactgcccgg ggcacgccga ctatgttaaa aacatgatca ccggtgctgc tcagatggac 300
ggcgcgatcc tggtagttgc tgcgactgac ggcccgatgc cgcagactcg tgagcacatc 360
ctgctgggtc gtcaggtagg cgttccgtac atcatcgtgt tcctgaacaa atgcgacatg 420
gttgatgacg aagagctgct ggaactggtt gaaatggaag ttcgtgaact tctgtctcag 480
tacgacttcc cgggcgacga cactccgatc gttcgtggtt ctgctctgaa agcgtctggaa 540
ggcgacgcag agtggaagc gaaaatcctg gaactggctg gcttcctgga ttcttatatt 600
ccggaaccag agcgtgcat tgacaagccg ttcctgctgc cgatcgaaga cgtattctcc 660
atctccggtc gtggtaccgt tgttaccggt cgtgtagaac gcggtatcat caaagttggt 720
gaagaagttg aaatcgttgg tatcaaagag actcagaagt ctacctgtac tggcgttgaa 780
atgttccgca aactgctgga cgaaggccgt gctggtgaga acgtaggtgt tctgctgcgt 840
ggtatcaaac gtgaagaaat cgaacgtggt cagggtactgg ctaagccggg caccatcaag 900
ccgcacacca agttcgaatc tgaagtgtac attctgtcca aagatgaagg cggccgtcat 960
actccgttct tcaaaggcta ccgtccgcag ttctacttcc gtactactga cgtgactggt 1020
accatcgaac tgccggaagg cgtagagatg gtaatgccgg gcgacaacat caaaatgggt 1080
gttaccctga tccacccgat cgcgatggac gacggtctgc gtttcgcaat ccgtgaaggc 1140
ggcctaccg ttggcgcggg cgttggtgct aaagtctctg gctaa 1185

<210> 699
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 699
gtnacnggyt cytyrarrrtt nccncc

26

<210> 700
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (2)..(2)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (5)..(5)
<223> n represents a modified base

<220>
<221> modified_base
<222> (2)..(2)
<223> i

<220>
<221> modified_base
<222> (5)..(5)
<223> i

<400> 700
tnrtngaygt cgarttcctt carg

24

<210> 701
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 701
gtgttcacga tcatcgatgc g 21

<210> 702
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 702
ctctcgatat ccgcgaagcg 20

<210> 703
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 703
tatggaaatt cgaaacatct 20

<210> 704
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 704
agtgtccaa ttaatgttgg 20

<210> 705
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 705
gtacagttcc aatacctgaa 20

<210> 706

<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 706
tgaaatcttc acatccaaca 20

<210> 707
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 707
twaccatttc agtaccttct ggtaa 25

<210> 708
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> modified_base

<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<400> 708
tcrtccatnc cnarnatngc natnat

26

<210> 709
<211> 1656
<212> DNA
<213> Borrelia burgdorferi

<400> 709
atgaatgaag ttttatttgt aaagactgct ggtaggaatt taaaagcaga agtaattcgt 60
attaggggca atgaagttga tgcacagggt tttgaattga caaaagggat atctgttgga 120
gacctagtgt aatttacaga caaactttta acagttgaac tcggaccagg gcttttaact 180
caagtatatg atgggcttca aaatcctttg cctgaattgg ctattcaatg tggatttttt 240
ttagaaagggt gagtatattt aaggcccttg aataaagata aaaagtggaa ttttaaaaaa 300
acctccaaag ttggagatat cgttattgca ggagattttt taggttttgt aattgaggga 360
actgttcacc atcaaataat gattccattt tataaaagggt attcttataa aattgtggag 420
attgtaagtgt atggcgacta ttcgattgat gagcaaattg ctgtaattga agatgattct 480
ggtatgaggc ataataattac aatgtctttt cattggcctg ttaaagttcc tattactaat 540
tataaggaac gccttattcc tagtgaacct atgttgactc aaactagaat tatagatata 600
tttttcccag ttgccaaagg tggaaacttt tgcattccgg gtccttttgg agcaggaaaa 660
acggttcttc agcaggttac aagtcgaaat gctgatgttg atgtagtgtt tattgcagct 720
tgtggtgagc gagcaggaga agtggttagaa actcttaaag aatttcccga attaatggat 780
ccaaaaaccg gcaaatcttt aatggacagg acttgtatta tttgtaatac atcttcaatg 840
ccagttgcag ctagagaagc ttctgtttat actgctatta ctattgggtga gtattacagg 900
caaatgggcc ttgatattct tcttttgcca gattcaactt caagatgggc tcaagcaatg 960
agagaaatgt ctggacgcct tgaggaaatt cctggcgagg aggccttttcc ggcatatctt 1020
gagtctgtta ttgcttcctt ttatgaaagg gcagggtatt tagttcttaa taatggggat 1080
attggatctg taacagtttg tggctctgta agtcctgctg gtggtaattt tgaagagcca 1140
gttactcaag caacttttaa agttgtagga gcatttcacg ggcttacaag agaaagggtt 1200
gatgctagga aatttccagc tatttagtctt cttgaatctt ggagtaaata taaaggcgtt 1260
attgatcaaa aaaagactga atatgcaaga tcttttttgg tgaaaggtaa tgaaattaat 1320
caaatgatga aagttgttgg agaagaaggc ataagtaacg atgatttttt aatttattta 1380
aaatccgagc tacttgattc gtgctatttg cagcaaaatt catttgattc tattgatgct 1440
gctgttagtt cagagcgtca aaattatatg ttgatatatg tttataacat tcttaaaaact 1500
aactttgagt tttctgataa acttcaagca agagatttta taaatgagtt aaggcaaaat 1560
cttttagaca tgaatctttc ttcttttaag gatcataagt ttaataaatt ggagcatgct 1620
ttgggtgaat tgataaattt taaaaaggta atttag 1656

<210> 710
<211> 1818
<212> DNA
<213> *Treponema pallidum* strain Nichols

<400> 710
gtgatcaaaag acgatgtggt tacaggccgt gtagtgaggg tgtctgggtcc catttgtgtat 60
gccgaggggcc tctctgcgtg cagcgtatac gatgttgctg acgtagggga agcatcgctc 120
atcggagaaa ttatccggtt ggatgagagc aaggcgggtcg tgcaagtata cgaggatgac 180
acaggtatgc gagtcgggga gaaggtgaca agcttgcgtc gaccactctc agtccgctta 240
gggcctggat taatcggcac catttatgac ggtattcagc gccacttga gcgcctcttc 300
caagaagacg gcgccttctt gcgtcctggt gcgcgttcac aaccgcttga tggctccgta 360
cgctgggatt ttcgtcctca ttgtaacgag cgcggtgagg ccctgtgctc ggggattccg 420
attgcacctg ggtcagtggt agggaccgtg caggagactc cttctgttgt gcacactatc 480
atggttctct ctgacatccg ggggagcgtg ctatcttcgt tcaagggcgc aggtgcttac 540
acaatagatg aagaaattgg acgcactgat cttggtgagc cgctttttct atcccagtac 600
tggccagtgc gtcgtgcgcg tccttttcagc aaaaaacttg cagtgtgtga gccactagt 660
actggacagc gggcgattga tgttttcttc cccctatcaa agggaggaac ggcggctatt 720
ccagggggat ttggaactgg gaagacaatg acgcagcatg ccgttgccaa gtggtgtgat 780
gcagatatta tccgtgtacat cggctgcgga gagcggggca acgagatgac agacgtgctc 840
tctgaatttc ccaaaactcat cgatccgcgc acaggacgct ctcttatgga gcggacgatt 900
ttgatcgcaa atacgtccaa tatgcctgtg tccgcacgcg aggtgtcgct gtattcaggg 960
attacccttg cggaatacta ccgtgatatg ggtatgcatg tggccatcat ggctgattct 1020
accagccgct gggcggaggg gctgcgtgaa ttgtctgggc gcatggaaga aatgcctgcg 1080
gaggagggat tccctgcgta ccttccgacg cgtcttgacg aattttatga gcgcgcagga 1140
cgctgggaaa cctgtgtggc gcgcgagggc tctgtgagca tcattggtgc tgtttctccc 1200
ctgggtggag atttctctga gccggtgacg cagcacacaa agcgccttcat ccgttgcttt 1260
tgggccttgg atcgtgaact tgcacacgcg cgctcattacc ctgccattgg gtgatatag 1320
tcatactctg aatatgcgca ggaagtaagt gcatggtgga gtaagtatga cccgcgcgca 1380
ggcgcgttgc gcgcgcagc cttggatttg ctgagaaagg aacagcgggt acagcaaatt 1440
gtcaggcttg tcggtcctga tgcgctgcct ggagaagatc gtctggtgct aatggtgtgt 1500
gaaatgatca aaggtggctt tctgcagcag aacgcttttg atccgacgga tgtgttctcc 1560
tgtcccgaag agcaggtgca gatcttgcgt accatagtgg attttcacga acgtgccgtg 1620
gtgctgctgc gtgcaggtat ttcgctttcc gcgctgtccc agctttcgtg ccgggagctc 1680
atcgtactga tgaaaactac gtacgggaat gaggatgtac acaagatgca gaaagtgtac 1740
gacacgatgt gcaactgagt tgaccaactg agtgtgtgtg ctgccgcgcg cacacaaggg 1800
ggggagaaaag tcgaatga 1818

<210> 711
<211> 1779
<212> DNA
<213> *Chlamydia trachomatis* strain MoPn

<400> 711
cagggtctatg tcgtagaagc ttacggaaat ttattgcggg tgcattttga tgggcatgtg 60
cgtcaaggag aagtggccta tgtcagcgtg gatgatactt ggttgaaagc ggaaattata 120
gaagttgttg gagatgaggt taaagtccaa gtttttgagg aaactcaagg aatttctcga 180
ggcgcttttg taactttttc cgggcattta ttagaagcgg aacttgggccc cgggtctattg 240
caaggtatgt ttgacggact tcagaatcgc ttagaggtat tggcagatac aagcttggtc 300
ttgaaaagag gggagtatgt taatgccatt tgcgggaaa ctgtatgggc ttatacgcaa 360
aaggtctctg tcggggatgt tctatctcgg ggagatgtgc ttggtacagt aaaggaagg 420
cggtttgatc ataaaatcat ggttcctttc tcttgttttg aggaagtgac tatcacttgg 480
gtcatttctt caggagatta cactgttgat accgttattg ctaaaggacg tactgcttca 540
ggagccgagc ttgaatttac aatggttcag aaatggccca ttaaacaggc ttttttagaa 600
ggggaaaagg taccgtctca tgaaattatg gatgttgggt tacgagtatt agatactcag 660
atccccgtct taaagggagg aactttttgt actccagggc cttttgggtc aggaaagacc 720
gtttttacagc accatttatc taagtattgc gctgtagata tcgtagtttt gtgtgcttgt 780
ggagagcgag ctggagaggt tgtagaaatt cttcaggagt tcccgcattt gacagatcct 840
catacggggc agtctttgat gcataggacc tgtattattt gtaatacatc ttccatgcct 900
gtagcagcta gagagtcctc catttatttg ggtattacta tagcagaata ttaccgtcaa 960
atggggttgc atgtttttgt attggctgac tgcacatcta gatgggctca agctttaagg 1020
gaaatttcag ggcgattaga agaaatccct ggagaagaag ctttcccagc ctatttggcg 1080
tctcgaatag cagcttttta tgagcgaggc ggggctgtga aaatgaaaga tggatcgga 1140
ggctccttga ctatctgtgg agcggtttct cccgcaggag gaaattttga agagcctgtt 1200

acacaagcaa	ctttatctgt	tgttggggct	ttctgtgggc	tttctaaggc	tagagcagat	1260
gctagacggt	atccttctat	tgatccgatg	atttcatggg	ctaagtactt	ggattctgtg	1320
gctggagattt	tagagaaaaa	agttccagga	tggggagatt	ccgttaaaaa	agcttctcgt	1380
ttcttagaag	aaggagcaga	aattggtaag	cgaatagaag	ttgttgggga	agaagggatt	1440
tctatggaag	atatagaaat	ctttttgaaa	tcagagttgt	atgatttctg	ttacttacag	1500
caaaacgctt	tcgatgcaga	ggactgttat	tgctcttttg	atcgtaaaat	agagcttttt	1560
tctttaatga	gtcatatttt	tagctctaga	ttctgttttg	attgtccaga	taatgctcgg	1620
agtttctttt	tagagcttca	aagtaaaatt	aaaacgctga	atgggtcaaaa	attcctttct	1680
gaagactatc	agaaggggct	agaagtgatc	tataaactat	tagaaagcaa	aatgggtgcag	1740
acggcgtagg	tatgcaaaaa	atatatacaa	gaattacgg			1779

<210> 712

<211> 965

<212> DNA

<213> *Enterococcus faecalis* strain V583

<400> 712

gtgcaaatgt	gaaaaattgt	caaagtttca	ggctcctttga	tttttagctga	aaacatgtca	60
gatgctagta	tccaagacat	ttgtcatgta	ggagattttag	gcgttatcgg	agagattatt	120
gaaatgctgag	gctgacgtcg	ttcgattcaa	gtatatgaag	aaacaacagg	cattggacca	180
ggagaaccag	ttatttcaac	aggagaacca	ttatctgttg	aattagcccc	aggttttaatt	240
gccgaaatgt	ttgatgggtat	tcaacgacca	ttggatacat	ttcaagaaat	aaccacacagt	300
aacttttttag	gccgtggcgt	taaaattgat	gcgttagatc	gtgagaaaaa	atggacgttt	360
gaaccaactg	tggcagtttg	tgaagaagtg	tcggcaggtg	acatcgtcgg	tgtggttcaa	420
gaaacaccga	ttattcaaca	taaaattatg	tgccctttcg	gcgttttcagg	aacgattgcc	480
gaaattaaag	caggtgactt	tgccattgat	gaaacagttt	actcagtggg	aacggctaaa	540
ggaacggaaa	gttttagcat	gatgcaaaaa	tggcccggtc	ggcgggggacg	tcccatttta	600
gaaaaactaa	gtcccaaagt	accgatgggt	accggacaac	gcgtaattga	tacctttttc	660
ccaattacga	aaggcggagc	ggcagcagtt	ccaggaccat	ttggcgctgg	aaaaacagtc	720
gttcagcacc	aaattgctaa	gtgggcggat	gtcgacttag	tcgttttacgt	tgggtgtggg	780
gaacgcggga	atgaaatgac	agatgtttta	aatgaatttc	cagaattaat	tgacccaaca	840
actggtgagt	ctttgatgaa	tcggacgatt	ttaattgcga	atacgtcaaa	tatgccggta	900
gcggcacggg	aagcctcgat	ttatacaggg	attaccattg	cagaatattt	ccgtgatatg	960
ggtta						965

<210> 713

<211> 1737

<212> DNA

<213> *Methanosarcina barkeri*

<400> 713

gtggaagtaa	aaggtgaaat	ttatcgtgtg	tctgggcctg	tcgtcaccgc	catcggtttg	60
caggcaaaaa	tgtatgacct	gggtcaaagtc	ggtaatgaag	gtttaatggg	tgaagtcatt	120
cagatatttag	ggcccaagac	catcatccag	gtatatgaag	agaccgcagg	tatcaagcca	180
ggggaaccct	gtgtatctac	agggtcgtct	ctgtccgtag	aacttgggtc	gggtcttctt	240
tccagtattt	atgacggggg	tcaaaggcct	ctgcacgtcc	tgcttgaaaa	aatgggtagc	300
ttcatccaga	gaggtgtcag	cgcagatggg	cttgatcata	agaaactctg	ggatttcaaa	360
cccattgtca	agaagggcga	ttccgtaaaa	ggtggagacg	taattgggtg	tgtacaggaa	420
accgtgaata	ttgaacataa	gatcatgggt	cctcctgata	tctcagggtac	aatttccgac	480
ataaagagcg	gaaactttac	ggtagtagac	acaatctgta	ctctgactga	tgggaccgaa	540
ttgcagatga	tgcagaggtg	gcctgttcga	agaccagac	ctgtgaaggc	aaaacttact	600
ccaaccaggc	ctctggttac	aggaatgaga	atccttgatg	ggcttttccc	tgtggcaaaa	660
ggcggaacag	ctgcaatccc	cggacctttc	ggatcgggaa	agaccgtaac	tcagcagtcg	720
cttgcaaaaat	ggagtgtatc	cgaattcttg	gtctacatcg	gttgtgggtg	gcgtggaaac	780
gaaatggcag	atgttctgag	cgaattccct	gaactcgaag	atccgcagac	cgggcgccca	840
cttatggagc	gtactgttct	tatcgctaac	acttcaaaac	tgccgtgtgg	cgcaagagaa	900
gcatctgtgt	ataccggaat	caccattgca	gaatactacc	gtgacatggg	attagatgta	960
tcccttatgg	cagactccac	ctcaagggtg	gcagaagcca	tgagagaaat	ctcttcccgt	1020
ctggaagaaa	tgccctgggtg	agaagggttac	ccagcatacc	tgtctgcaag	actggccgaa	1080
ttctacgagc	gtgccggggg	tgccggagagt	ctttgcggcg	aaacagggttc	cattactgtt	1140
attggagcag	tatctccacc	tggcggtgac	ttctcagagc	ctgttacaca	gaataccctg	1200
cgtatcgtaa	aagtgttctg	ggctctcgat	gccaaactat	ctcagaggcg	tcacttcccg	1260
gccatcaact	ggctgaacag	ttacagtcgt	tataaggaca	gtcttaatatg	ctgggttgca	1320
gataatgtgg	ctcctgatta	tgtgcctttg	agggaaagag	caatggaaat	gtccagaca	1380

gaatctgaac	tgcaggaaat	cgtgcagctt	gtagggttccg	atgctctgcc	agacgaccag	1440
cagcttctgc	ttgaaatcac	ccgtatgctt	agggaaattt	tcctgcagca	gaatgcattc	1500
caccagtag	atgcatacag	cccgttcgat	cagcagtaca	agatccttaa	ggcaatcatg	1560
aaatggggag	acgctgcgat	ggatgccttg	aaatcagggtg	ttcccgtaac	tgaaattatc	1620
aagcttgaat	ccaaaaatgt	gcttgctaag	gtcaagtacg	aagagaagtt	tgatgagtct	1680
atgaatgctg	tcctggcaca	gatggataaa	gagtttgcac	ccctgagagg	taggtaa	1737

<210> 714

<211> 1785

<212> DNA

<213> *Methanosarcina jannaschii*

<400> 714

atgaaaagag	aggttgagaa	tatgccagtt	gttggttaaga	ttattaaaaat	cgcagggcct	60
gttgtagttg	cagaggggaat	gaaaggagct	cagatgtatg	aggctcgtaa	agtaggagaa	120
gagaaattga	ctggagaaat	cattcagttg	cacgatgata	aagcagttat	tcaggtttat	180
gaagaaacat	ctggaattaa	accaggagag	ccagttgttg	gtactggagc	tccattgtct	240
gttgaattag	ggccagggat	gttaagagct	atgtatgatg	gtattcagag	gcctttaaca	300
gcaattgaag	agaaaacagg	ttcaatcttt	atcccaagag	gagttgatgt	ccctgcatta	360
ccaagagata	taaaatggga	atttaaacca	gtggtaaatg	aaggagatta	tggtgaagaa	420
ggagacataa	ttggaaactgt	tgatgaaact	ccttcaatag	ttcataaaaat	cttagttcca	480
attggtgtta	aaggaaaaat	tggtgaaata	aaagagggta	aatttacagt	tgaagagaca	540
gttgcagttg	tagaaacaga	aaatggagaa	aggaaagaaa	ttacaatgat	gcaaaaatgg	600
ccagtaagaa	aaccaagacc	atataaagag	aaactacctc	cagaaattcc	attaattaca	660
gggcaaagag	ttgaagacac	tttctttaca	ttagcaaaaag	gaggaaacagc	agcaattcca	720
ggtccattcg	gttcaggaaa	aacggttact	cagcatcagt	tggaacagtg	gtctgacgct	780
gatgtcgttg	tttatatcgg	atgtggagaa	agaggaaacg	agatgacaga	ggttattgaa	840
gagttcccac	acttagaaga	tattagaact	ggaaacaaat	taatggatag	aactgtatta	900
atagccaaca	catcaaact	gcctgtcgt	gcaagggaag	catctgtcta	tacaggaatt	960
acaattgcag	agtacttcag	agatatgggt	tatggagtgt	tattaacagc	agattcaaca	1020
tcaagatggg	cagaggcaat	gagagaaat	tcaggtagat	tggaagaaat	gccaggggaa	1080
gaaggggtatc	cagcatactt	agcttcaaga	ttggctcagt	tctatgaaag	agctggaaga	1140
gttataacct	tagggaaaga	taacagacaa	ggattcgttt	gtatcgttgg	agctgtttca	1200
ccaccaggag	gggacttctc	agaaccagtt	acatcaaaca	cactaaggat	agtttaaggta	1260
ttctgggcgt	tagatgcaaa	cttggcaaga	agaagacact	tcccagctat	caactgggtg	1320
cagagttatt	cattatacat	tgatgatgtt	acagagtggg	ggaacacaaa	tactggtcca	1380
gattggagac	aattaagaga	tgaagcaatg	agcttattac	aaaaagaggc	agagttgcaa	1440
gagattgttc	agttagttgg	gcctgatgca	ttgccagata	gggagagagt	tattttagaa	1500
gttgcaagaa	tggtgagggg	ggattttctt	cagcaagatg	cgtttgatga	ggttagatacc	1560
tactgtcctc	caatgaaaca	gtacttaatg	ttaaagataa	ttatgacatt	ctaccaagaa	1620
gcattgaagg	cagttgaaag	aggagttgaa	ccagctaaga	ttttaggagt	ttcagtttaag	1680
caagatattg	caagaatgaa	atacatccca	cacgatgagt	ttataaatgt	taaatcaaaa	1740
gaaataatgg	agaaaattaa	gaatgaatta	ggttcattaa	actaa		1785

<210> 715

<211> 1354

<212> DNA

<213> *Porphyromonas gingivalis* strain W83

<400> 715

tgagcgaggt	gatcaagggtg	atcggcaaaa	atgcttatgt	gcaggttttc	gaaagtaactc	60
gcggtatgca	cgtaggagat	gaggcagagt	ttaccggcag	tatgcttgag	gtaacgctcg	120
gccccggtat	gctttcgaag	aactacgagc	gtctgcaaca	cgacttggac	aagatggacg	180
ggatcttcct	caaacgaggc	gattatactc	ccgctctcga	tgacgacaag	ctgtgggact	240
tcaagccttt	ggccaatgtg	aacgacaatg	tgatcgagag	ctcatggctc	ggagaggtga	300
cggaaaattt	ccaaccgcac	aagatcatgg	tacctttcgt	tttcgaaggc	aattacaagg	360
tgaagagtct	ggccaaagcc	ggttcgtaca	aagtgaacga	tgtgatcgct	tggtgtaacgg	420
atcaggacgg	gaaagaccac	aatgtaacca	ttggtcgagaa	atggccgggtg	aaacgtgcta	480
tcacttgcta	tcgcgagaag	ccgcgtcctt	tcaaactgct	cgaaacgggt	atccgtatca	540
tcgacacttt	caaccccatc	gtagagggtg	gtacgggatt	tatccccggg	cctttcggta	600
cgggaaagac	ggtgctccag	catgctatct	cgaagcaggc	ggaagccgat	atcgtgatca	660
ttgcagcctg	tggcgagcgt	gcaaacgagg	ttgtggagat	ccttgccgaa	ttccccacc	720
tgaatgaccc	ccacacggga	cgtaaatgga	tgggaacgtac	cattattatt	gctaatacgt	780
cgaatatgcc	tgtggcttcg	cgtgaggcat	ccgtatatac	ggccatgacg	atagccgagt	840

actatcgctc	catggggcctt	cgcgtgctga	tgatggcaga	ctccacttcg	cgttgggcac	900
aggctctgcg	tgagatgtct	aaccgtctgg	aagagcttcc	cggaccggat	gctttcccga	960
tggacttgtc	agctatcgta	gccaacttct	acgctcgtgc	aggatacggt	tacctgaaca	1020
acggttcggc	cggttcggta	acgttcacgc	gtacgggtatc	tcccgcgggt	ggtaacctca	1080
aagagcctgt	gacggaaaac	accaagaaag	tggtcgcgtg	cttctatgct	ttggagcaga	1140
atcgtgccga	ccgcaaactg	tatccggctg	taaaccccat	cgatagttac	tcgaagtaca	1200
tcgaatatcc	cgaattcgag	agctatatat	cgaaccacat	cagtttactc	atttatattca	1260
acagaagttg	gcagatatat	ggatcaaadc	ttacagcaga	ctggactact	aaggtgaatg	1320
agctgaagat	gcgcttgcat	cagggtaaag	aaat			1354

<210> 716

<211> 1788

<212> DNA

<213> *Streptococcus pneumoniae* strain Type 4

<400> 716

tttgactcaa	gggaagatta	taaaagtatc	gggacctcta	gttattgcat	caggtatgca	60
ggaggcta	attcaagata	tttgccgtgt	aggtaagcta	gggttaatcg	gtgaaattat	120
tgaaatgaga	agagatcagg	catctatcca	agtctatgaa	gaaacatctg	gtcttgggtcc	180
gggagaacct	gttggtacaa	ctggagaacc	tctctcgggt	gaattagggc	caggattgat	240
ttctcaaatg	tttgatggca	tacaacgccc	attagatcga	tttaaattgg	ctactcataa	300
tgatttttcta	gttcgtgggg	tagaagttcc	aagtttggtg	agagatatta	agtggcattt	360
tgattccact	atagcaattg	gtcaaaaagt	gagtacgggt	gatattcttg	gaactgtcaa	420
ggaaaccgag	gtagttaatc	ataaaattat	ggttccttat	ggagtatctg	gagaagtcgt	480
ttctattgca	tctggcgatt	ttacaattga	tgaagttgta	tatgaaataa	aaaaattgga	540
cggtagtttc	tataaaggaa	cgcttatgca	aaaatggcct	gtccgcaagg	cgcgctcctgt	600
ttctaaacgt	ttaattccag	aagaaccatt	aatcacaggt	caacgagtta	ttgatgcatt	660
ctttccagta	accaaagggg	gagctgcagc	agttcctgga	ccgtttggag	caggaaagac	720
agttgtacaa	caccaagtag	ctaaaatttg	caatggtgat	attggtattt	atgtcgggtg	780
tggagaacgt	ggaaatgaaa	tgacggatgt	actgaatgag	tttcctgagt	tgattgaccc	840
taataaccgga	caatcaatta	tgcaacggac	agttctgatt	gctaataact	caaatatgcc	900
tgttgctgct	cgtgaggcct	caattttatac	aggaattacc	atggctgagt	attttcgtga	960
tatgggctac	tctgtcgcca	ttatggctga	ttcaacttca	cgttgggcag	aagcgctacg	1020
tgaaatgtca	ggacgtctag	aagaaatgac	tggtgatgag	ggttatcctg	cttatctggg	1080
aagtcgtatc	gctgaatatt	atgaaagagc	aggacgttct	caggttctag	ggcttccaga	1140
acgtgaagga	acgattactg	ctattggagc	tgtatcgcca	cctgggtggag	atatttcaga	1200
accagttact	caaaacactt	tacggattgt	gaaagttttt	tgggggcttg	atgctccgtt	1260
ggcacagcga	cgtcattttc	ctgcaattaa	ctggcttaca	tcttattcac	tatataaaga	1320
cagtgtgggc	acttatatag	atggtaaaag	gaagacagat	tggaaatagta	aaataactcg	1380
tgcgatgaac	tacttacaac	gggaatctag	tttagaggaa	attgttcgtc	ttgttggaa	1440
tgattctctg	tctgataatg	aacgactaac	gatggaaatt	gctaaacaaa	ttcgagaaga	1500
ttatttgcaa	cagaacgctt	ttgattcggg	agatacattc	acttcgtttg	caaaacaaga	1560
agcaatgcta	agtaatatcc	tcacttttgc	tgatcaggca	aatcatgctt	tagagttggg	1620
ttcttacttt	acagagatta	tggaaggatg	cgtggcaggt	cgagaccgta	tggcgagaga	1680
taaatatggt	tcagaagata	gattagatga	aatcaaaatt	atatcaaatg	agattacaca	1740
tcaaattcat	ttgatattag	aaacaggagg	tctataaatg	agtgttat		1788

<210> 717

<211> 823

<212> DNA

<213> *Burkholderia mallei* strain GB8

<400> 717

cgatcctggg	gtgctcggcc	getgacggcc	cgatgccgca	aacgcgtgag	cacatcctgc	60
tggcgcgtca	ggtcgggtgtg	ccgtacatca	tcgtgttcct	gaacaagtgc	gacatgggtg	120
acgacgcgga	gctgctcgag	ctggtcgaaa	tggaaagtgcg	cgaactgctg	tcgaagtacg	180
acttcccggg	cgacgacacg	ccgatcatca	aggttccggc	gaagctggcg	ctggaaggcg	240
acaagggcga	gctgggcgaa	gtggcgatca	tgaacctggc	cgacgcgctg	gacacgtaca	300
tcccgcgccc	ggagcgtgcg	gtcgacggcg	cgttcctgat	gccgggtggaa	gacgtgttct	360
cgatctcggg	ccgtgggtacg	gtgggtgacgg	gtcgtgtcga	gcgcggcgctg	atcaagggtg	420
gcgaggaagt	cgaaatcgct	ggatcaagg	cgacggcgaa	gacgacctgc	acgggcgtgg	480
aaatgttccg	caagctgctg	gaccagggtc	agggcggcga	caacgtcggt	atcctgctgc	540
gcggcacaaa	gcgtgaagac	gtggagcgcg	gccagggttct	ggcgaagccg	ggttcgatca	600
gcggcgacac	gcacttcacg	gcagaagtgt	acgtgctgag	caaggacgaa	ggcggccgcc	660

```

acacgcccgtt cttcaacaac taccgtccgc agttctactt ccgtacgacg gacgtgacgg 720
gctcgatcga gctgccgaag gacaaggaaa tggatgatgcc gggcgacaac gtgtcgatca 780
cggatgaagct gatcgcgccg atcgcgatgg aagaaggctc gcg 823

```

<210> 718
 <211> 824
 <212> DNA
 <213> Burkholderia pseudomallei strain 1026B

```

<400> 718
gcgatcctgg tgtgctcggc cgctgacggc ccgatgccgc aaacgcgtga gcacatcctg 60
ctggcgcgct aggtcggtgt gccgtacatc atcgtgttcc tgaacaagtg cgacatgggtg 120
gacgacgcgg agctgctcga gctggtcgaa atggaagtgc gcgaactgct gtcgaagtac 180
gacttccccg gcgacgacac gccgatcatc aagggttcgg cgaagctggc gctggaaggc 240
gacaagggcg agctgggcga agtggcgatc atgaacctgg ccgacgcgct ggacacgtac 300
atcccgcgcg cggagcgtgc ggtcgatggc gcgttcctga tgccggtgga agacgtgttc 360
tcgatctcgg gccgtggtac ggtggtgacg ggtcgtgtcg agcgcggcgt gatcaagggtt 420
ggcgaggaaa tcgaaatcgt cggatatcaag gcgacggcga agacgacctg cacggggcgtg 480
gaaatgttcc gcaagctgct ggatcagggc caggcggggc acaacgtcgg tatcctgctg 540
cgcggcacga agcgtgaaga cgtggagcgc ggccaggttc tggcgaaaggc ggggttcgatc 600
acgcccgcaca cgcacttcac ggctgaagtg tacgtgctga gcaaggacga aggcggccgc 660
cacacgccgt tcttcaacaa ctaccgtccg cagttctact tccgtacgac ggacgtgacg 720
ggctcgatcg agctgccgaa ggacaaggaa atgggtgatgc cgggcgacaa cgtgtcgatc 780
acggatgaagc tgatcgcgcc gatcgcgatg gaagaaggtc tgcg 824

```

<210> 719
 <211> 800
 <212> DNA
 <213> Clostridium beijerincki ATCC 8260

```

<400> 719
tgtatcagca gcagatggtc caatgccaca aacaagagaa catatactac taggatcaag 60
agttggtatc caatatatcg tagtattctt aaataaagca gatatggtag acgatccaga 120
attattagaa ttagtagaaa tggaaagtaag agaattatta agcgaatatg acttcccagg 180
agacgatatt ccagtaataa caggatcagc attaaaagca ttagaaaatc caacagatga 240
agaagcaatt aagccaatca tggatttaat ggaagcagta gatagctata tcccactcc 300
agaaagagca acagataagc cattcttaat gccaatcgaa gatgtattca caattacagg 360
aagaggaaca gttgcaacag gaagagttga agctggagta cttcatgtag gagatgaagt 420
agaaatcggt ggattaacag aagaaaagaa gaaagttgta gtaactggaa tcgaaatgtt 480
cagaaagtta ttggatgaag cacaagctgg agataacatc ggagcattat taagaggagt 540
tcaaagaact gatattgaaa gaggtcaagt tttatcaaaa ccaaattcag tacaccctca 600
cactaaatgt gtaggtcaag tatacgtagt taaaaaagaa gaaggtggaa gacatactcc 660
attctttgat ggatacagac cacaattcta tttcagaaca acagacgtta cagggtcaat 720
caagttacca gatggaatgg aaatggtaat gcctggagat cacattgata tgaatgttga 780
attaatcact ccaatcgcaa

```

<210> 720
 <211> 799
 <212> DNA
 <213> Clostridium innocuum ATCC 14501

```

<400> 720
gggtgctatcc tgggtgttgc tgcattctgat ggtcctatgc ctcagactcg tgagcacatc 60
ctgcttgctc gtcaggtagg tgttccttac atcgttgtat tccgaacaa atgcgacatg 120
ggtgatgacg aagaactgat cgaccttggt gaaatggaag tacgtgagct gtttagcgag 180
tacggattcg acggagataa cgctccggtt atccgtgggt ctgcactgaa ggctctggaa 240
ggtgacgaca aatacgttgg cgctatcaaa gaactgatgg atgcagttga tgaattcatc 300
ccagatccaa ctcgtgaaac tgacaaacca ttctgatgt ctgtagaaga cgttatgaca 360
atcacaggac gtggtacagt tgctacagga cgtgttgagc gtggggtagt aaaactggga 420
gaagaagttg aaatcgttgg tatcaaggat actcagaaaa ctggtgttac cggactggaa 480
atgttccgta agcagctgga cttcgcaaaa tccggagaca acatcggtgc tctgctgcgt 540
gggtatcaacc gtgaccagat tcagcgtgga cagggtcttg ctaaaccagg atccgtacat 600
ccacacacaa agttcaaggc tcagggttat gtattaacaa aagaagaagg tggacgtcac 660

```

```
actccattcg tttctaacta ccgtcctcag ttctacttcc gtacaactga cgtaactggc 720
gttattacat taccggaagg aactgaaatg gttatgcctg gtgacaacgt tgaaatgaac 780
gttgagctga ttgctccaa 799
```

<210> 721
<211> 789
<212> DNA
<213> Clostridium novyi ATCC 19402

```
<400> 721
ttgtatcagc agcagatggc ccaatgccac aaacaagaga acacatccta ttagcatcaa 60
gagtaggagt taaccacata gtagtattct taaacaaagc agaccaagta gatgatccag 120
aattactaga attagtagaa atggaagtaa gagaattatt aagcgaatac ggatttgacg 180
gagacgaatg tccagtagta gtaggatacag cattaaaagc aatcgaagaa ggggatgacc 240
aatgcacctc agacttaaat aaagctgtag atgaatatat cccaactcca gaaagagcaa 300
cagatcaacc attcttaaat cctgtagaag atgtatttac aattacagga agaggaacag 360
ttgcaacagg aagagttgaa agaggagtac tacacgtagg agatgaagta caaatcgtag 420
gaatgaaaga agaaatcgga aagacaacaa tcacaggagt agaaatgttc agaaagatgt 480
tagatgaagc aatggctgga gataacatcg gagcattatt aagaggagta caaagagacg 540
aaatcgaaag aggtcaaagt ctagcaaaac caggttcagt aacacctcac aaaaaattcg 600
taggtcaaagt ttacgtatta aagaaagaag aaggtggaag acacactcca ttctttaacg 660
gatacagacc acaattctac ttcagaacaa cagacgtaac aggatcaatc gctttaccag 720
aaggagtaga aatggtaatg ccaggagacc atatagacat gaacgtagaa ttaatcacac 780
cagtagcaa 789
```

<210> 722
<211> 798
<212> DNA
<213> Clostridium septicum ATCC 12464

```
<400> 722
gttcagcagc agacgggtcca atgccacaaa caagagaaca tatactacta gcatcaagag 60
ttggtgttga ctatatcgta gtattcttaa acaaggcaga tatggtagat gacgaagaat 120
tattagaatt agtagaaatg agagttagag aattattatc agaatacaac ttcccaggag 180
atgatattcc agtaatcaag ggatcagctt tagtagcatt agaaaaccca acagatgaaa 240
aatcaatcgc tccaatctta gaattaatgg aagcagtaga tagctacatt ccaacaccag 300
aaagagcaac agataagcca ttcttaaatgc cagtagaaga tgtattcaca ataactggta 360
gaggaacagt tgcaacagga agagttgaaa gaggagttct tcatgtagga gacgaagtag 420
aaatcgttgg attatcagaa gaaagcagaa aagtagtagt aacaggaata gaaatgttca 480
gaaagttact agacgaagca caagctggag ataatgttgg agtactttta agaggtgttc 540
aaagaacaga tatcgaaaga ggtcaagtat tagcaaagac tggatcagtt aagccacaca 600
gcaagttcgt aggtcaagta tacgtactta agaaagaaga aggtggaaga cactactccat 660
tcttcgatgg atacagacca caattctact tcagaacaac agacgttact ggatcaatca 720
aattaccaga cggaatggaa atgggttatgc caggagacca cattgatatg aacgttgaat 780
taatcactca agtagcaa 798
```

<210> 723
<211> 799
<212> DNA
<213> Clostridium tertium ATCC 14573

```
<400> 723
gttcagcagc agatgggtcca atgcctcaaa caagagaaca catactacta gcttcaagag 60
ttggtgttga ctacatagtt gttttcttaa acaaggcaga tatggtagat gacgaagaat 120
tattagaatt agttgaaatg gaagtaagag aattattatc agaatacaac ttcccaggag 180
atgatattcc agtaataaag ggttcagctt tacaagcatt agaaaaccca acagatgaaa 240
aagcaatcgc tccaatcctt gagttaatgg aagctgtaga tagctacatt ccaactccag 300
aaagagcaac agataagcca ttcttaaatgc cagtagaaga tgtattcaca atcactggta 360
gaggaacagt tgctacagga agagttgaaa gaggagttct tcacgtagga gacgaagtag 420
aaatcgttgg attatcagaa gacagcagaa aagtagtagt aacaggaata gaaatgttca 480
gaaagttact agacgaagcg caagctggag acaacgtagg agttctttta agaggagtgc 540
aaagaactga catcgaaaga ggtcaagttt tagcaaaagt tggatcagtt aagccacaca 600
agaaatttgt aggtcaagta tacgtactta aaaaagaaga aggtggaaga catactccat 660
```

tcttcgatgg	atacagacca	caattctact	tcagaacaac	agaygttact	ggttcaatca	720
agttaccaga	tggaatggaa	atgggttatgc	caggagacca	cattgatatg	aacgttgaat	780
taatcactca	agtagctat					799

<210> 724
 <211> 801
 <212> DNA
 <213> Clostridium tetani ATCC 19406

<400> 724						
tagtaagtgc	agcagatggt	ccaatgccac	aaacaagaga	acacatacta	ttagcatcca	60
gagttggagt	tgagcacata	gtagtattct	taaataaagc	agaccaagta	gatgacgcag	120
agttaatcga	attagtagaa	atggaagtaa	gggaattaat	gaacgaatac	ggattcccag	180
gagatgacgc	accagtagta	gtaggatccg	cattaaaagc	attagaaaat	ccagaagatg	240
atgcagcaac	acaatgcata	atggacttaa	tggcagcagt	agatgaatat	ataccaacac	300
cagaaagagc	aacagataag	ccattcttaa	tgccagtaga	agatatcttc	acaatcacag	360
gaagaggaac	agttgcaaca	ggaagagtag	aaagaggaat	tctaaaagta	ggagacgaaa	420
tagaaatcgt	aggattaagt	gatgaaagca	agaaatcagt	aatcacagga	atagaaatgt	480
tcagaaaact	attagatgaa	gcacaagcag	gagataacat	cggagcatta	ttaagagggtg	540
ttcaaagaga	tgaaatccaa	agagggtcaag	tattagcagc	aacaggatca	gtaaaaccac	600
ataagagttt	tacaggtcaa	gtatatgtat	taaagaaaaga	agaaggagga	agacacactc	660
cattcttttaa	cggatacaga	ccacaattct	actttagaac	aacagacgta	acagggttcaa	720
tcgcactacc	agaaggagta	gaaatggtaa	tgccaggaga	ccacatagac	atgaaggtag	780
aattaataac	aagagtagca	a				801

<210> 725
 <211> 633
 <212> DNA
 <213> Enterococcus malodoratus ATCC 43197

<400> 725						
tatgcctcaa	actcgtgaac	acatcttggt	atctcgtaac	gttgggtgttc	cttacatcgt	60
tgtattctta	aacaaaatgg	atatgggtga	tgatgaagaa	ttactagaat	tagttgaaat	120
ggaagttcgt	gacttattgt	cagaatacga	cttcccaggc	gacgacactc	cagttatcgc	180
tggttcagct	ttgaaagctt	tagaaggcga	tgcttcatac	gaagaaaaaa	tcttagaatt	240
aatggctgct	gttgatgaat	atatcccaac	accagttcgt	gatactgaca	aaccattcat	300
gatgccagtc	gaagatgtat	tctcaatcac	tggtcgtgga	actggttgcaa	ctgggtcgtgt	360
tgaacgtgga	caagttcgcg	ttggtgacga	agttgaaatc	gttgggtattg	ctgaagcaac	420
tgctaaaaca	actgttacag	gtgttgaaat	gttcggtaaa	ttgttagatt	acgctgaagc	480
aggcgataac	attgggtgcat	tggttacgtg	tggtgcacgt	gaagacatcc	aacgtggaca	540
agtattggct	aaaccagctt	caatcactcc	acatacaaaa	ttctctgcag	aagtttacgt	600
tttaactaaa	gaagaaggcg	gacgtcatac	tcc			633

<210> 726
 <211> 623
 <212> DNA
 <213> Enterococcus sulfureus ATCC 49903

<400> 726						
cacgtgaaca	catcttggtta	tctcgtaacg	taggtgttcc	ttacatcgtt	gtattcttaa	60
acaaaatgga	tatgggttgat	gacgaagaat	tattagaatt	agtagaaatg	gaagttcgtg	120
acttattatc	agaatacga	ttcccaggcg	atgacactcc	agttgttgca	ggttctgctt	180
tgaaagcttt	agaaggcgac	gcttcttacg	aagaaaaaat	catggaatta	atggctgcag	240
ttgacgagta	catcccaact	ccaactcgtg	acactgacaa	accattcatg	atgccagttg	300
aggatgtatt	ctcaatcact	ggacgtggta	ctggttgctac	aggctcgtgtt	gaacgtggac	360
aagttcgcgt	tggtgacgtt	gtagatatcg	ttggtatcgc	tgacgaaact	gctcaaacaa	420
ctgtaacagg	tggtgaaatg	ttccgtaaaat	tattagacta	cgctgaagca	ggcgataaca	480
tcggtgcttt	attacgtggg	gttgctcgtg	aagacatcca	acgtggacaa	gttttagcta	540
aaccagcttc	aatcactcca	catacaaaaat	tctctgctga	agtatacgtg	ttaagcaaag	600
aagaagggtg	acgtcatact	cca				623

<210> 727

<211> 646
<212> DNA
<213> *Lactococcus garvieae* ATCC 49156

<400> 727
cggtcctatg cctcaaaactc gtgaacacat cttgttatca cgtaacgttg gcgtaccata 60
catcggttggt ttcttgaaaca aaatggatat gggtgatgac gaagaattgc tagaattagt 120
tgaaatggaa gttcgtgacc tattgtctga atatgacttc ccaggcgacg atgttcctgt 180
aatcgctggg tctgctttga aagctcttga aggagatcct tcatacgaag aaaaaatcat 240
ggaattgatg gctgcagttg acgaatacgt tccaactcca gaacgtgata ctgacaaacc 300
attcatgatg ccagtcgaag acgtattctc aatcactgga cgtggtactg ttgctacagg 360
ccgtggttgaa cgtggacaag ttgcgcttgg tgatgaagta gaaatcgttg gtattgctga 420
cgaaactgct aaaacaactg taacaggtgt tgaaatgttc cgtaaattgt tagactatgc 480
tgaagcaggg gataacattg gtgcattgct acgtgggggt gctcgtgaag acatccaacg 540
tggacaagta ttggctaaag ctggtacaat cacacctcat acaaaattca aagctgaagt 600
ttatgttttg acaaaagaag aaggtggacg tcacactcca ttcttc 646

<210> 728
<211> 823
<212> DNA
<213> *Mycoplasma pirum* ATCC 25960D

<400> 728
gagcaatttt agttgtttct gcaactgatg gtccaatgcc tcaaactcgt gaacatatct 60
tattagcacg ccaagttggg gttcctaaaa ttggtgtttt cttaaacaaa tgtgatgttg 120
cttctgatcc agaaatgcaa gaattagttg ctgaagaagt aaaagactta ttaaaatctt 180
atggttttga tgggtgacaat actccaatta ttcgtggttc agcattagaa gcattaaatg 240
gtaaacctga atgagaagaa aaaattaaag aattaatgaa ggcagtggat gacactattc 300
ctgatccagt tcgtgatact gaaaagccat tcttgttacc aattgaagac gtaatgacaa 360
ttacagggtcg tggtagctgt tttagcaggtc gtgtagaacg tggtagctta aaattaaatg 420
atgaagttga aattgttggg tttaggtgaaa catttaaatc tgttgtaaca ggtattgaaa 480
tggtccgtaa agaattagat gaagctcgtg ctggtgacaa tgctgggtatt ttacttcgtg 540
gtgttgaccg tgggtcaagta caacgtgggc aagttcttgc taaaccaggt tctattactc 600
ctcatactaa atttaaagct gaaatttatg ctttgaaaaa agaagaaggt ggtcgtcata 660
ctgctttctt aaacggttat cgtcctcaat tctatttcag aacaactgat gttacaggtt 720
ctattaaatt aaaagatgga actgaaatgg ttatgcctgg tgacaatact gaaatcactg 780
tagaattaat ttcaccaatt gcttgtaaaaa aggaagtaag ttt 823

<210> 729
<211> 826
<212> DNA
<213> *Mycoplasma salivarium* ATCC 23064

<400> 729
ggagcaatct tagttgttgc tgcaactgat ggtgcgatgc ctcaaactcg tgaacacggt 60
ttacttgcaa aacaagttgg tgttcctaaa atcgttggtt tcttaaacaa aatcgatatg 120
ttcaagccag aagaaagagc cgaaatgggt gaaatgggtt aaatggacat tcgtgactta 180
ttaaacaaat acgactttga tgggtgacaat actcctatta ttgctgggtc agcattaaaa 240
gcattacaag gtgatccaga atatgaaaag aatattctag aacttatgga tgcagtagac 300
acatacattg atgaacctac tcgtgataaa gataaaccat tcttaatggc tgtagaagac 360
gtatttacia ttactggtcg tggaaactgtt gctactggta gagtagaacg tggtagatta 420
catctaaatg atgaagttga aatcgttggg ctacgtccaa caattaaaac gtttggtact 480
ggaattgaaa tgttcgtaa aaatttaaaa gaagctcaag ctggagataa tgcaggactt 540
ttactacgtg gaattgatag agatcaagta gaacgtggac aagttttggc caaaccaaaa 600
agtattattc ctccacacaga atttgaagct gctgtgtatg ttctaaaagc tgaagaaggt 660
ggacgtcaca ctccattctt tgaacactat aaaccacaat tttactttcg tacaaccgac 720
gttactgggt gaattaaatt caaacctgga cgtgaaatgg ttatgcctgg cgaaaatgtt 780
gaattttacg ttactttaat tgctcctatt gcagttgaag aaggaa 826

<210> 730
<211> 810
<212> DNA
<213> *Neisseria polysaccharea* ATCC 43768

<400> 730

```
tggtatgttc cgcagcygay ggyccatgc ctcaaactcg cgaacacatc ctgytggctc 60
gccaaagtag ygtaccttac atcatcgtrt tcatgaacaa atgcgacatg gttgacgatg 120
ccgagctggt ggaactgggt gaaatggaaa tccgygacct gytgtcmagc tacgacttcc 180
cmggcgacga ctgcccaatc gtacaaggtt ctgcactgaa agctttggaa ggygaygctg 240
gttacgaaga gaaaatcttc gaaytggctg ctgctttgga cagctacatc ccaactcctg 300
agcgtgctgt ggacaaacck ttctygtgct ctatcgaaga cgtrttctct atctctggyc 360
gyggtacmgt agtaacyggy cgtgtagagc gcggttrcat ccacgttggt gacgagatyg 420
aaatcgtagg tctgaaagaa acccaaaaaa ccacttgtag cggcgttgaa atgttccgca 480
aactgctgga cgaagggtcaa gcwgggtgaca acgtaggcgt attgytgctg ggtaccaarc 540
gtgaagacgt agagcgtggt caagtattgg cyaaaccagg yaccatyact ccscacacca 600
aattcaaagc agaagtatac gtactgagca aagaagaggg tggctcgycac actccattct 660
tcgcyaacta ccgyccmcaa ttctacttcc gtacyactga cgtaacyggt gcagttactt 720
tggaagaagg tgtagaaatg gtaatgccag gtgagaacgt aaccattacy gtagaactga 780
ttgcgcctat cgctaggaag aaggtctgcg 810
```

<210> 731

<211> 813

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 13076

<400> 731

```
ctggttgttg ctgcgactga cggccccgat cgcgagacc gtgagcacat cctgctgggt 60
cgtcaggtag gcgttccgta catcatcggt ttcctgaaca aatgcgacat ggttgatgac 120
gaagagctgc tggaactggt tgaaatggaa gttcgygaac tgctgtctca gtacgacttc 180
ccgggcgacg acactccgat cgttcgtggt tctgctctga aagcgtgga aggcgacgca 240
gagtgggaag cgaaaatcat cgaactggct ggcttctggt attcttacat cccggaacca 300
gagcgtgcga ttgacaagcc gttcctgctg ccgatcgaag acgtattctc catctccggt 360
cgtggtaccg ttgttaccgg tcgtgtagaa cgcggtatca tcaaagtggg cgaagaagtt 420
gaaatcgttg gtatcaaaga gactcagaag tctacctgta ctggcggtga aatgttccgc 480
aaactgctgg acgaaggccg tgccggtgag aacgtagggt ttctgctgcg tggatatcaa 540
cgtgaagaaa tcgaacgtgg tcaggtactg gctaagccgg gcaccatcaa gccgcacacc 600
aagttcgaat ctgaagtgtg cattctgtcc aaagatgaag gcggccgtca cactccgttc 660
ttcaaaggct accgtccgca gttctacttc cgtactactg acgtgactgg caccatcgaa 720
ctgccggaag gcgtagagat ggtaatgccg ggcgacaaca tcaaaatggg tgttaccctg 780
atccaccgca tcgcaatgga cgacggtctg cgt 813
```

<210> 732

<211> 812

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 9184

<400> 732

```
ctggttgttg ctgcgactga cggccccgat cgcgagacc gtgagcacat cctgctgggt 60
cgtcaggtag gcgttccgta catcatcggt ttcctgaaca aatgcgacat ggttgatgac 120
gaagagctgc tggaactggt tgaaatggaa gttcgygaac tgctgtctca gtacgacttc 180
ccgggcgacg acactccgat cgttcgtggt tctgctctga aagcgtgga aggcgacgca 240
gagtgggaag cgaaaatcat cgaactggct ggcttctggt attcttacat cccggaacca 300
gagcgtgcga ttgacaagcc gttcctgctg ccgatcgaag acgtattctc catctccggt 360
cgtggtaccg ttgttaccgg tcgtgtagaa cgcggtatca tcaaagtggg cgaagaagtt 420
gaaatcgttg gtatcaaaga gactcagaag tctacctgta ctggcggtga aatgttccgc 480
aaactgctgg acgaaggccg tgccggtgag aacgtagggt ttctgctgcg tggatatcaa 540
cgtgaagaaa tcgaacgtgg tcaggtactg gctaagccgg gcaccatcaa gccgcacacc 600
aagttcgaat ctgaagtgtg cattctgtcc aaagatgaag gcggccgtca cactccgttc 660
ttcaaaggct accgtccgca gttctacttc cgtactactg acgtgactgg caccatcgaa 720
ctgccggaag gcgtagagat ggtaatgccg ggcgacaaca tcaaaatggg tgttaccctg 780
atccaccgca tcgcaatgga cgacggtctg cg 812
```

<210> 733

<211> 814

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 8759


```
<400> 733
tggttggtgc tgcgactgac ggyccgatgc cgcagaccgc tgagcacatc ctgctgggtc 60
gtcaggtagg cgttccgtac atcatcgtgt tcctgaacaa atgcgacatg gttgatgacg 120
aagagctgct ggaactgggt gaaatggaag ttcgygaact gctgtctcag tacgacttcc 180
cgggcgacga cactccgatc gttcgtgggt ctgctctgaa agcgtctgaa ggcgacgcag 240
agtgggaagc gaaaatcatc gaactggctg gcttcctgga ttcttacatt ccggaaccag 300
agcgtgcatc tgacaagccg ttctgctgc cgtatcgaaga cgtattctcc atctctggtc 360
gtggtaccgt tgttaccggt cgtgtagaac gcggtatcat caaagtgggc gaagaagtgc 420
aaatcgttgg tatcaaagag actcagaagt ctacctgtac tggcgttgaa atgttccgca 480
aactgctgga cgaaggccgt gcyggtgaga acgtagggtg tctgctgcgt ggtatcaaac 540
gtgaagaaat cgaacgtggt caggtactgg ctaagccggg caccatcaag ccgcacacca 600
agttcgaatc tgaagtgtac attctgtcca aagatgaagg cggccgtcat actccgttct 660
tcaaaggcta ccgtccgcag ttctacttcc gtactactga cgtgactggc accatcgaac 720
tgccggaagg cgtagagatg gtaatgccgg gcgacaacat caaatgggtt gttaccctga 780
tccaccgatc cgcaatggac gacggtctgc gttt 814
```

```
<210> 734
<211> 828
<212> DNA
<213> Salmonella choleraesuis subsp. choleraesuis ATCC 51955
```

```
<400> 734
ggcgcgatcc tggttggtgc tgcgactgac ggcccgatgc cgcagaccgc tgagcacatc 60
ctgctgggtc gtcaggtagg cgttccgtac atcatcgtgt tcctgaacaa atgcgacatg 120
gttgatgacg aagagctgct ggaactgggt gaaatggaag ttcgtgaact tctgtctcag 180
tacgacttcc cgggcgacga cactccgatc gttcgtgggt ctgctctgaa agcgtctgaa 240
ggcgacgcag agtgggaagc gaaaatcatc gaactggctg gcttcctgga ttcttacatt 300
ccggaaccag agcgtgcatc tgacaagccg ttctgctgc cgtatcgaaga cgtattctcc 360
atctccggtc gtggtaccgt tgttaccggt cgtgtagaac gcggtatcat caaagtgggc 420
gaagaagtgc aaatcgttgg tatcaaagag actcagaagt ctacctgtac tggcgttgaa 480
atgttccgca aactgctgga cgaaggccgt gccggtgaga acgtagggtg tctgctgcgt 540
ggtatcaaac gtgaagaaat cgaacgtggt caggtactgg ctaagccggg caccatcaag 600
ccgcacacca agttcgaatc tgaagtgtac attctgtcca aagatgaagg cggccgtcat 660
actccgttct tcaaaggcta ccgtccgcag ttctacttcc gtactactga cgtgactggc 720
accatcgaac tgccggaagg cgtagagatg gtaatgccgg gcgacaacat caaatgggtt 780
gttaccctga tccaccgatc cgcaatggac gacggtctgc gtttcgca 828
```

```
<210> 735
<211> 825
<212> DNA
<213> Serratia grimesii ATCC 14460
```

```
<400> 735
ggcgcctatcc tggttggtgc tgcgactgat ggcccaatgc cacagaccgc tgagcacatc 60
ctgctgggtc gtcaggttgg cgttcccttc atcatcgtat tcatgaacaa atgcgacatg 120
gttgatgatg aagagctgct ggaactggta gaaatggaag ttcgtgaact tctgtctgct 180
tatgacttcc ctggtgatga cctgccagtt gttcgtgggt cagcgtctgaa agcactggaa 240
ggcgaagctg agtgggaagc taaaatcatc gaactggctg gctacctgga ttcttacatc 300
ccagaaccag agcgtgctat cgacaagccg ttctgctgc caatcgaaga cgtattctcc 360
atctccggyc gtggtacygt agttaccggt cgtgtagagc gcggtatcgt taaagtggc 420
gaagaagtgc aaatcgttgg tatcaaagac accgttaagt ctacctgtac tggcgttgaa 480
atgttccgca aactgctgga cgaaggccgt gctggtgaga acgtagggtg tctgctgcgt 540
ggtatcaagc cgaacgtggt caggtactgg ctaaaccagg ttcaatcaag 600
ccacacacca aattcgactc agaagtttac atcctgagca aagaagaagg tggctgtcac 660
actccattct tcaaaggcta ccgtccacag ttctacttcc gtacaactga cgtgaccggt 720
accatcgaac tgccagaagg cgtagagatg gtaatgccag gcgataacgt gaacatgggt 780
gtaaccctga ttcacccaat cgcgatggac gacggtctgc gtttc 825
```

```
<210> 736
<211> 798
<212> DNA
<213> Clostridium difficile ATCC 9689
```

<400> 736
tatttagtttg ttcagcaaca gatggacca tgccacaaac aagagagcat atactattat 60
caagacaagt tggagtagca tatatagtag tattctttaa caaatgtgac atggtagatg 120
atgaagagtt attagagtta gtagagatgg aagtaagaga tttattaaca gaatatgatt 180
tcccaggaga tgacactcca atagtaagag gtccagcatt aatggcatta gaagatccaa 240
agagygagtg gggagataag atagtagaat tattcgagca aatagatgag tatataccag 300
ctccagagag agatacagat aaaccattct taatgccagt agaggacgta ttctcaatca 360
caggaagagg aacagttgca acaggaagag tggaaagagg agtactaaaa gtacaagacg 420
aagtagaktt agtaggatta acagaagcac caagaaaagt agtagtaaca ggagtagaga 480
tgttcagaaa attattagac caagcacaag caggggataa tataggagca ttattaagag 540
gagtacaaag aaacgagata gaaagaggac aagtactagc aaagactgga tcagtaaagg 600
cacacacaaa gtttacagca gaagtatat tacttaaaaa agaagarggt ggaagacata 660
caccattctt tgatggatat agaccacaat tctatttcag aacaacagac gtaacaggag 720
cttgtaagtt accagaagga atagagatgg taatgcctgg agataacgta acaatggaag 780
tagacttaat aaactcaa 798

<210> 737
<211> 411
<212> DNA
<213> Burkholderia pseudomallei strain 1026B

<400> 737
gtcaacatga tggagctcat caacaacatc gcgaaggagc acggcgggta ctccgtgttc 60
gcgggcggtg gcgagcgtag ccgtgaaggg aacgacttct accacgaaat gaaggactcg 120
aacgttctcg acaaggtcgc gctgggtgtac ggccagatga acgagccgcc gggcaaccgt 180
ctgcgcgtgg cgctgacggg cctcacgatg gccgagcact tccgtgacga aggcctcgac 240
gtgctgttct tcgtcgacaa catctaccgt ttcacgctgg ccggtaccga agtgtcggcg 300
ctgctcggcc gtatgccgtc ggcagtgggc tatcagccga cgctgggtga agaaatgggc 360
aagctgcaag agcgcacac gtcgacgaag aagggctcga tcacgtcggg t 411

<210> 738
<211> 394
<212> DNA
<213> Clostridium bifermentans ATCC 638

<400> 738
tacaagagct tattaacaat atagctactc aacacgggtg tatatcagta ttcgcaggtg 60
ttggagagag aacaagagaa ggtaacgact tattccatga gatgagcgat acaggagtta 120
taaataaaac agctctagta ttcggacaaa tgaatgagcc acctggagca agaagtagag 180
ttgctttaac tgggtcttaca atggctgaat acttcagaga tcaacaaggg caagacgttt 240
tattattcgt agataatata ttccgtttca ctcaagcagg atctgaggtt tctgcacttc 300
ttggacgtac tccatcagca gttggatacc aaccaacatt agcaacagag atgggtagat 360
tacaagagag aataacatct acaaataaag ggtc 394

<210> 739
<211> 394
<212> DNA
<213> Clostridium beijerincki ATCC 8260

<400> 739
ttaataaaca acatagctaa acaacatggt gggtttatcag tatttactgg agttgggtgaa 60
agatcaagag aaggtaatga cttatatcat gaaatgagag agtcaggagt tattgataag 120
acagcattag tatttggaca aatgaatgag ccaccgggtg ccagaatgag agttgcatta 180
acaggctcta ctatggcaga gtattttaga gataaagggtc aagatgtgtt actattcata 240
gataacatat tcagatatac tcaagcaggt tcagagggtt cagcattact tggagaaga 300
ccttcagcgg ttggatatca gccaacactt gcaactgaaa tgggtgcact tcaggaaaga 360
attacatcaa cagttaatgg ttctattacg tcag 394

<210> 740
<211> 393
<212> DNA
<213> Clostridium difficile ATCC 9689

<400> 740
 ttataaacaa tattgctaag caacatgggt gtattttctgt attttcagga gtaggagaaa 60
 gaacaagaga aggtaacgac ctttatggcg aaatgagtga gtctggagtt ataaataaaa 120
 cagctctagt atttgggtcaa atgaatgaac cacctggagc gagaatgaga gttgctttaa 180
 ctggacttac aatggcagaa catttttagag atgagcaagg acaagacgtt ttacttttcg 240
 ttgataatat attccgtttc acacaagctg gttcagaagt ttcagcactt ctaggacgta 300
 tgccatcagc tggttggttat cagccaacat tagctactga aatgggtgca cttcaagaga 360
 gaataacatc aactaagaaa gggtcaataa cat 393

<210> 741
 <211> 398
 <212> DNA
 <213> *Clostridium ramosum* ATCC 25582

<400> 741
 ttgattcaag aattcattaa taacattgct acagaacatg gtggttttatc agttttttgct 60
 ggagttgggtg aacgtagccg tgaaggtaat gatttatatt atgaaatgaa ggaaagtggg 120
 gttttatcta aaacaacact agtattttgga cagatgaatg aacccccagg agctcgttta 180
 agagttgctt taacgggtct tactatggca gaagaattcc gtgatgaaca aggtcaggat 240
 gtcttattat tcatcgataa tattttccgt tttactcaag ctggatctga agtatctgcc 300
 ttacttggac gggtaccatc acaagctggg tatcagccaa ctttagcaac cgaaatgggt 360
 gctttacaag aacggattac atcaactaaa aaaggatc 398

<210> 742
 <211> 380
 <212> DNA
 <213> *Clostridium septicum* ATCC 12964

<400> 742
 tagctaagga acacgggtgga ctttcagtat tcacaggtgt tggagaaaga tcaagagaag 60
 gtaatgattt atattacgaa atgaaagaat caggagtatt agacaagaca gctctagtgt 120
 ttggacaaat gaatgaatct ccaggagcta gaatgagagt atctttaaca ggattaacta 180
 tggctgaata tttcagagat caagggtcaag atgtgctttt attcatagat aacatattta 240
 gatttactca agctggatca gaagtatcgg ctttacttgg aagaatacca tcagcagttg 300
 gttatcaacc aacactagca actgaaatgg gtgcacttca agaaagaatt acttcaacta 360
 aaaatggatc aataacttca 380

<210> 743
 <211> 389
 <212> DNA
 <213> *Clostridium tertium* ATCC 14573

<400> 743
 ttaataaata atatagcaaa agagcatggt ggtctttctg tatttacagg agttggagaa 60
 aggtcaagag aaggtaacga cttatattat gaaatgaaag agtcaggggt tatagataag 120
 acagcttttag tattttggaca aatgaatgaa tcaccaggag caagaatgag agtttcatta 180
 actggattaa ctatggctga atattttaga gatcaagggtc aagacgttct tttattttata 240
 gataatatat ttagatttac tcaagcggtga tcagaagttt ctgctgttatt aggaagaatt 300
 ctttcagcag ttggatatca accaactctt gcaactgaaa tgggagcact tcaagaaaga 360
 ataacatcaa caaagaatgg atcaatcac 389

<210> 744
 <211> 843
 <212> DNA
 <213> *Comamonas acidovorans* ATCC 15668

<400> 744
 ttcccccgca cgcattgccc aggtgttcga tgccctgaag ctgcacggct cggccctgac 60
 gctggaagtg cagcaactgc tgggtgacgg cggtgtgctg accatcgccc tgggttcgct 120
 cgacggtctg cgctcgccgc tgatggtgtc caacaccggc aaccccatca ccgtgcccg 180
 gggcaaggcg acgtctgggtc gcatcatgga cgtgctgggc aatcccatcg acgaacgtgg 240
 tcccggtgat caggcgctga cggctcccat ccaccgcaag gcaccggctt atgacgagct 300

```
gtcgccttcg caggaactgc tggaaaccgg catcaaggtg atcgacctga tctcgccctt 360
cgccaagggc ggcaaggtgg gtctgttcgg tggcgccggg gtgggcaaga ccgtgaacat 420
gatggaactc atcaacaaca tcgccaaggg ccacgggtgg ctgtcggtgt tcgccggtgt 480
gggtgaacgt acccgcggaag gcaatgactt ctatcacgaa atgtcggacg ccggcgtggg 540
caaccaggag tcgctgaacg actccaaggt ggccatgggt tacggccaga tgaacgaacc 600
ccccgggaac cgtctgcgcg tggcgctgac cggcctgacc atggccgaag ccttcggtga 660
cgaaggcaag gacgtgctgt tcttcgtgga caacatctac cgctacacgc tggccggtac 720
cgaagtgtcc gctctgctgg gtcgcatgcc ttccgcccgt ggctaccagc ccacgctggc 780
cgaggaaatg ggccgcctgc aagagcgcac cacctcgacc aaggctcggt cgatcacttc 840
cac
```

<210> 745

<211> 819

<212> DNA

<213> *Klebsiella pneumoniae* subsp. *rhinoscleromatis* ATCC 13884

<400> 745

```
gccgtaccac gcggtgtacga agcccttgag gtacagaatg gtaatgaagt tctgggtgctg 60
gaagttcagc agcagctggg cggcggtatc gtacgtacca tcgccatggg ttcttctgat 120
ggctctgcgc gcggtctgga tgtaaaagac ctcgagcacc cgatcgaagt cccggtaggt 180
aaagcaacgc tgggtcgtat catgaacgta ctgggtcaac cggttgacat gaaaggcgac 240
atcggcgaag aagagcgttg ggctatccac cgcgcggcac cgtcctatga agagctgtcc 300
agctctcagg aactgctgga aaccggcatc aaagttatcg acctgatgtg tccgttcgac 360
aagggcggtg aagttgggtc gtccggcggt gcggtgtag gtaaaactgt aaacatgatg 420
gagctgatcc gtaacatcgc gatcgagcac tccggttact ctgtgtttgc gggcgtaggt 480
gagcgtactc gtgagggtaa cgacttctac caggaatga ccgactcaa cgttatcgat 540
aaagtatccc tgggtgtacg ccagatgaac gagccgcggg gaaaaccgtc gcgcgttgcg 600
ctgaccggcc tgaccatggc tgagaaatc cgtgacgaag gtcgtgacgt actgctgttc 660
gtcgataaca tctatcggtt caccctggcc ggtactgaag tatccgcgct gctgggtcgt 720
atgccttcag cggtaggtta tcagccgacc ctggcggaag agatgggcgt tctgcaggaa 780
cgtatcacct ccacaaaaac cggttctatc acctccgta
```

<210> 746

<211> 824

<212> DNA

<213> *Neisseria canis* ATCC 14687

<400> 746

```
gcgattctat tccgcgcgta tatgatgtc ttaaactagt ggatagagaa ctgacgcttg 60
aagtacaaca acagttgggt gatggtgtcg ttcgtactat tgcgatgggt agttccgacg 120
gcctcaaacg aggtttggcg gtagttaaca ccggtgctcc aattacagtg cctgtgggca 180
aagcaacatt aggcggtatt atggacgtat taggtaatcc ggttgatgaa gctgggccga 240
ttggctccga gcaaaccgca gcaatccacc aacctgctcc taagttcgac gagctttcta 300
gcgccacaga gattttggaa acaggtatta aagtaattga tttgctttgc ccgtttgcca 360
aagggcgtaa agtaggtttg tttggtggtg cgggagtggg caaaaccgta aatatgatgg 420
agttgattaa caacatcgcg aaagcacaca gcggtttgtc tgtatttgcc ggtgtgggtg 480
aacggacgcg tgaaggtaat gacttttatc atgagatgaa agattccaat gtattagata 540
aagtagccat ggtttacggg catgatgaac agcctcccgg taaccgtttg cgcgttgccg 600
taactggctt gtctatggcc gaattcttcc gtgacgagaa agatgaaaac ggtaaaggcc 660
gtgatgtatt gttctttgta gacaatattt accgctatac ctagccgggt acagaagtat 720
ctgcattgct tggccgcatg ccttcggcag taggttatca gccgacgttg gcagaggaaa 780
tgggcgcgtt gcaagagcgt attacytcam cccaaacagg ctct
```

<210> 747

<211> 831

<212> DNA

<213> *Neisseria cinerea* ATCC 14685

<400> 747

```
cgcgacgcta tcccgcatgt ttacgatgcc ctgaaattgg acgagaacgg tctgactctg 60
gaggttcaac agcttctggg cgacggcggt gtccgtacta ttgcaatggg tagttcagac 120
ggccttaaac gcggtatgtc tgtaagcaat actggtgcgc caatcactgt gccggtaggt 180
aaaggtacat tgggtcgtat tgtcgacgta ttgggtacgc ctgttgatga agcaggtccg 240
```

atcgataccg	acaaaagccg	tgccattcac	caaactgctc	cgaaattcga	cgagttgtct	300
tcagctaccg	aattgttggg	aaccggtatt	aaagtgatcg	acttgctgtg	tccgtttgct	360
aaaggcggtg	aagtaggtct	gttcggtggt	gccggtgtgg	gcaaaaccgt	gaacatgatg	420
gaattgatca	acaacatcgc	caaagcgcac	agcgggtctgt	ccgtgttcgc	aggtgtgggt	480
gagcgtaccc	gtgaaggtaa	cgacttctac	cacgagatga	aagattccaa	cgtattggat	540
aaagtagcca	tgggtgatgg	ccaaatgaac	gaacctccgg	gcaaccgtct	gcggtttgct	600
ttgaccgggt	tgactatggc	cgaatacttc	cgtgacgaaa	aagacgaaaa	cggtaaaggg	660
cgcgacgtat	tgttcttcgt	tgacaacatc	taccgttaca	ctttggccgg	tactgaagta	720
tctgcactgt	tgggcccgtat	gccttctgca	gtgggttacc	aaccgacatt	ggctgaagaa	780
atgggtcggt	tgcaagagcg	tattacctct	acccaaaccg	gttcattac	t	831

<210> 748

<211> 862

<212> DNA

<213> *Neisseria cuniculi* ATCC 14688

<400> 748

ccgtggccaa	gtaccacaaa	tttatgacgc	actgagtgtt	gatggcaccg	aaacaacctt	60
ggaagtcca	cagcagttgg	gtgatggcgt	ggtgcgtacc	attgcgatgg	gttcaaccga	120
aggcttgaag	cgtgggttga	ctgtatctaa	ctctggtgca	ccgatttctg	tgccagtggtg	180
tcaagcgact	ttgggtcgta	ttatggatgt	gttgggtcgt	ccaatcgacg	aggcaggtcc	240
tgtaaatgct	caagaaaaat	ggtcaattca	ccgtgaagca	ccaagctatg	atgagcaatc	300
aaactcaact	gagctgctag	aaacaggcat	caaagtaatt	gatttgcttt	gccccatttgc	360
taaaggtggt	aaagttaggt	tggttcgggtg	tgcaggtgtg	ggtaaaaccg	tgaatatgat	420
ggagctgatt	aataatatcg	ctctgaagca	ttcaggtcct	tctgtttttg	caggtgttgg	480
tgagcgtact	cgtgagggtg	acgattttta	tcacgaaatg	caagaagcag	gcgttggtta	540
taccgaagac	ttcaccaagt	caaaagtagc	gatggtttat	ggtcagatga	atgagccacc	600
aggaaaccgt	ttgcgtgttg	cattgacagg	cttgacgatg	gcagaatatt	tccgtgacga	660
aaaagatgaa	gcaacaggca	aagggcgtga	tgttctattg	ttcgttgata	acatctatcg	720
ttacacactg	gctggtacgg	aagtgtcagc	acttctaggt	cgtatgccat	cagcagtagg	780
ttatcaaccg	actctggctg	aagaaatggg	tgcgttgcaa	gagcgtatta	cctcaacgca	840
atcgggttcg	atcacttcgg	gg				862

<210> 749

<211> 844

<212> DNA

<213> *Neisseria elongata* subsp. *elongata* ATCC 25295

<400> 749

ggaactccca	cgtgacgcta	tcccgcgatgt	ttttgatgca	ttaaaattag	ttgaaaatga	60
cctaaccctta	gaagttcaac	aacttttggg	ggatgggtgta	gtgcgtacca	ttgcgatggg	120
tagttcagat	ggattaaagc	gtgggtatggc	tgtgaataat	accggagctc	cgattactgt	180
tccgtttggc	cgtgaaactt	tgggtcgat	catggatgta	ttgggtaatc	cggttgatga	240
ggcaggtccg	gtaaatgcat	ccaatacacg	tgcgatccat	caagaggctc	ctaagtttga	300
tgagctttct	tcaacaacgg	aattattaga	aactggcatt	aaggttatcg	acttgttatg	360
tccgtttgcc	aaaggtggta	aagtaggtct	gtttgggtgg	gcgggtgtag	gtaaaaccgt	420
aaatatgatg	gagttaatta	acaacattgc	caaggcacat	agcggtttgt	ctgtgtttgc	480
aggcgtgggt	gaacgtactc	gtgaaggtaa	tgacttctat	cacgagatga	aagattccaa	540
cgtattggac	aaagtggcaa	tgggttacgg	tcagatgaac	gaacctccag	gcaaccgtct	600
gcgcgttgct	ttgaccgggt	tgactatggc	cgaatacttc	cgtgacgaaa	aagacgaaaa	660
cggtaaagg	cgcgacgtat	tgttcttcgt	ggacaacatt	taccgttaca	ctttggccgg	720
tacggaagta	tccgcattgc	tgggtcgat	gccttcagca	gtaggttacc	aaccgacatt	780
ggctgaagaa	atgggtcggt	tgcaagagcg	tattacctct	accagacag	gctctattac	840
ttcc						844

<210> 750

<211> 834

<212> DNA

<213> *Neisseria flavescens* ATCC 13120

<400> 750

cgcgacgcta	ttccgcgatgt	ttacgatgcc	ctgaaattgg	acgagaacgg	tctgactctg	60
gaagttcaac	agcttctggg	tgacggcggt	gtccgtacta	ttgcaatggg	tagttcagac	120

ggcctgaaac	gcggcacgtc	tgtaagcaat	accggtgcgc	caatcactgt	gccggtaggt	180
aaaggtacat	tggggccgtat	tgtecgacgta	ttgggtacgc	ctgttgatga	agcaggtccg	240
atcgataccg	acaagagccg	tgccattcac	caaactgctc	cgaaattcga	tgagttgtct	300
tcaactaccg	aattgttgga	aaccggtatt	aaagtgatcg	acttgctgtg	tccgtttgct	360
aagggcggta	aagtaggtct	gttcgggtgg	gccggtgtgg	gcaaaaccgt	gaacatgatg	420
gaattgatca	acaacatcgc	caaagcgcac	agcggcctgt	ccgtgttcgc	aggtgtgggt	480
gaacgtaccc	gtgaaggtaa	cgacttctac	cacgagatga	aagattccaa	cgtattggat	540
aaagtagcca	tgggtgatgg	tcaaataaac	gaacctccag	gcaaccgtct	gcgcgttgct	600
ttgaccgggt	tgactatggc	cgaatacttc	cgtgacgaaa	aagatgaaaa	cggtaaaggt	660
cgcgacgtat	tggtcttcgt	tgacaacatc	taccgttaca	ctctggccgg	taccgaagta	720
tccgcactgt	tgggtcgtat	gccttctgca	gtgggttacc	aaccgacatt	ggctgaagaa	780
atgggtcggt	tgcaggagcg	tattacttct	acgcaaaccc	gttccattac	ttcc	834

<210> 751
 <211> 834
 <212> DNA
 <213> *Neisseria gonorrhoeae* ATCC 31426

<400> 751						
cgcgacatga	ttccgcgcgt	ttacgacgct	ttgaaattag	acgaaaacgg	tctgactttg	60
gaagtccaac	agcttttggg	tgatggcgta	gtccgtacca	tcgctatggg	cagctcggac	120
ggtttgaaac	gcggcacgtc	tgtagcaaat	actggttcgc	ccattactgt	gccggtaggt	180
aaaggtacgt	tgggacgcat	tgtecgatga	ttgggaaactc	ctgttgacga	ggcaggtcca	240
attgataccg	acaagagtcg	tgccatccac	caagccgctc	ctaagtgtga	cgaactgtct	300
tccacaaccg	aattgctcga	aacgggcatt	aaagtgattg	acttgctgtg	tccgtttgcc	360
aaagggcggta	aagtaggtct	gttcggcggt	gccggtgtgg	gtaaaaccgt	gaacatgatg	420
gaattgatca	acaacatcgc	caaagcgcac	agcggcttgt	ccgtgttctc	aggcgtgggt	480
gagcgtaacc	gcgaaggtaa	cgacttctac	cacgagatga	aagattccaa	cgtattggat	540
aaagtagcca	tgggtgatgg	ccaaatgaac	gaacctccag	gcaaccgtct	gcgcgttgct	600
ttgaccgggt	tgactatggc	tgaatacttc	cgtgacgaaa	aagacgaaaa	cggtaaaggt	660
cgtgacgtat	tggtcttcgt	tgacaacatc	taccgttaca	ctctggccgg	taccgaagta	720
tccgcactgt	tgggcccgtat	gccttctgca	gtgggttacc	aaccgacatt	ggctgaagaa	780
atgggtcggt	tgcaagagcg	tattacctct	acccaaaccg	gttccattac	ttcc	834

<210> 752
 <211> 825
 <212> DNA
 <213> *Neisseria gonorrhoeae* ATCC 27628

<400> 752						
acatgattcc	gcgcgtttac	gacgctttga	aattagacga	aaacgggtctg	acttttggag	60
tccaacacgt	tttgggtgat	ggcgtagtcc	gtaccatcgc	tatgggcagc	tcggacgggt	120
tgaacgcggg	catgactgtg	agcaatactg	gttcgcccac	tactgtgccg	gtaggtaaat	180
gtacgttggg	acgcattgtc	gatgtattgg	gaacgcctgt	tgacgaggca	ggtccaattg	240
ataccgacaa	gagtcgtgcc	atccaccaag	ccgctcctaa	gtttgacgaa	ctgtcttcca	300
caaccgaatt	gctcgaaacg	ggcattaaag	tgattgactt	gctgtgtccg	tttgccaaag	360
gcggtaaagt	aggtctgttc	ggcgggtgcc	gtgtgggtaa	aaccgtgaac	atgatggaat	420
tgatcaacaa	catcgccaaa	gcgcacagcg	gcttgtccgt	gttctcaggc	gtagggtgagc	480
gtaccgcgca	aggtaacgac	ttctaccacg	agatgaaaga	ttccaacgta	ttggataaag	540
tagccatggg	gtatggccaa	atgaacgaac	ctccaggcaa	ccgtctgcgc	gttgctttga	600
ccggtttgac	tatggctgaa	tacttccgtg	acgaaaaaga	cgaaaaccgt	aaaggtcgtg	660
acgtattgtt	cttcgttgac	aacatctacc	gttacactct	ggccgggtacc	gaagtatccg	720
cactgttggg	ccgtatgcct	tctgcagtgg	gttaccaccc	gacattgggt	gaagaaatgg	780
gtcgtttgca	agagcgtatt	acctctaccc	aaaccggttc	catta		825

<210> 753
 <211> 831
 <212> DNA
 <213> *Neisseria lactamica* ATCC 23970

<400> 753						
gatgcgattc	cgcatgttta	cgatgccctg	aaattggacg	agaacgggtct	gaccctggaa	60
gtccaacagc	ttttgggtga	cggcgttgct	cgtactattg	caatgggtag	ttcagacggc	120

```

ctgaaacgcg gcatgtctgt cagcaatacc ggtgcgccaa tcaactgtgcc ggtaggtaaa 180
ggtacgttgg gccgtattgt cgacgtattg ggtacacctg ttgacgaagc aggtccgatc 240
gataccgaca agagccgcgc catccaccaa accgccccga aattcgacga gttgtcttca 300
actaccgaat tgttggaac cggcattaaa gtgatcgatt tgctgtgtcc gtttgctaag 360
ggcggtaaa taggtctgtt cgggtggtgcc ggtgtgggca aaaccgtgaa catgatggaa 420
ttgatcaaca acatcgccaa agcgcacagc ggtctgtccg tgtttgcagg cgtgggcgag 480
cgtaacgcgc aaggtaacga cttctaccac gagatgaaag attccaacgt attggataaa 540
gtagccatgg tgtatgggtca gatgaacgaa cctccgggca accgtctgcg cgttgctttg 600
accggtttga cgatggccga atacttccgc gacgaaaaag acgaaaacgg caaaggccgc 660
gacgtattgt tcttcgtgga caacatctac cgttacaccc tggccgggtac cgaagtatcc 720
gcactgttgg gccgtatgcc ttccgcagtg ggttaccacac cgacattggc tgaagaaatg 780
ggtcgtttgc aagagcgtat tacctctacc caaacccggt ccattacttc c 831

```

<210> 754

<211> 836

<212> DNA

<213> *Neisseria meningitidis* strain 2241C

<400> 754

```

ccacgcgaca tgattccgcg cgtttacgac gctttgaaat tagacgaaaa cggctctgact 60
ttggaagtcc aacagctttt gggcgacggc gtagtccgta ccattgcgat gggcagctcg 120
gacggtttga aacgcggcat gactgtgagc aataccgggtg cgcccattac tgtgccggta 180
ggtaaaggta cgttgggacg cattgtcgat gtattgggaa cgctgttga cgaggcaggt 240
ccaatcgata ccgacaagag ccgtgccatc caccaagccg ctccctaagtt tgacgaactg 300
tcttcacaa ccgaattgct cgaaacgggc attaaagtga ttgacttgct gtgtccggtt 360
gccaaaaggcg gtaaagttagg tctgttcggc ggtgcgggtg tgggtaaaac cgtgaacatg 420
atggaattga tcaacaacat cgccaaagcg cacagcggct tgtccgtgtt cgcaggcgtg 480
ggtgagcgta cccgcgaagg taacgacttc taccacgaga tgaaagattc caacgtattg 540
gataaagtgg caatggttta cggtcagatg aacgaacctc cgggcaaccg tttgcgcgtc 600
gcattgaccg gtttgaccat ggcggaatac ttccgtgacg aaaaagacga aaacggcaaa 660
ggccgcgacg tattgttctt cgtggacaac atctaccgtt acactctagc tggtagcgaa 720
gtatccgcat tgttgggccc tatgcccgtc gcagtgggct accaaccgac attggcagaa 780
gaaatgggtc gtttgcaaga gcgtattacc tctacccaaa ccggttctat tacttc 836

```

<210> 755

<211> 837

<212> DNA

<213> *Neisseria mucosa* ATCC 19696

<400> 755

```

ccgcgtgatg ccattccgcg tgtttacgac gccctgaaat tggatgcaaa cggcctgact 60
ttggaagtgc aacagcttct ggggtgacggc gtagttcgta ctattgcaat gggtagttcg 120
gatggtttga aacgcggcat gactgtaagg aatacaggtg cgccgattac agtaccggta 180
ggtaaaaggta ctttgggacg tattgtcgat gtattgggta cgctgttga cgaagcaggt 240
ccgattgata ccgacaaaca ccgtgccatc catcagacag ctccgaaatt tgatgaactg 300
tctgcgacta ctgagctgct ggaaaccggc attaaagtga ttgacttgct gtgtccggtt 360
gccaaaggcg gtaaagttagg tctgttcggc ggtgccgggtg taggcaaaac cgtcaacatg 420
atggaattaa ttaacaacat cgccaaagca catagcggtt tgtccgtgtt tgcagggtgtg 480
ggtgagcgta cccgtgaagg taatgacttc taccacgaga tgaaagattc caacgtattg 540
gacaaagtgg cgatggttta cggtcagatg aacgaacctc cgggtaaccg tctgcgtgta 600
gccttgaccg gtttgacgat ggccgaatac ttccgtgatg aaaaagacga aagcggcaaa 660
ggccgtgacg tattgttctt cgtggacaac atctaccgtt acaccctggc cggtagcgaa 720
gtatccgcat tgttgggtcg tatgccttca gcagtagggt accaaccgac attggctgaa 780
gaaatgggtc gtttgcaaga gcgtattacc tctacccaaa caggctccat tacctcc 837

```

<210> 756

<211> 834

<212> DNA

<213> *Neisseria subflava* ATCC 14221

<400> 756

```

cgcgacgcta tcccgcgatg ttacgatgcc ctgaaattgg acgagaacgg tctgactctg 60
gaagttcaac agcttctggg tgacggcggt gtccgtacta ttgcaatggg tagttcagac 120

```

ggcctgaaac	gcggtcatgtc	tgtaagcaat	actggtgctg	caatcactgt	gccggtaggt	180
aaaggtacat	tgggtcggtat	tgtagcagta	ttgggtacgc	ctgttgatga	agcaggtccg	240
atcgataccg	acaagagccg	tgccattcac	caaactgctc	cgaaattcga	cgagttgtct	300
tcaactaccg	aattgctgga	aaccggtatt	aaagtgtatg	acttgctgtg	tccgtttgct	360
aagggcggtg	aagtaggtct	gttcggtggt	gccggtgtgg	gcaaaaccgt	gaacatgatg	420
gaattgatca	acaacatcgc	caaagcgcac	agcggctctg	ccgtgttcgc	aggtgtgggt	480
gaacgtaccc	gtgaaggtaa	cgacttctac	cacgagatga	aagattccaa	cgtattggat	540
aaagtagcca	tggtgtatgg	ccaaatgaac	gaacctccgg	gcaaccgtct	gcgcgttgct	600
ttgaccgggt	tgactatggc	cgaatacttc	cgtgacgaaa	aagacgaaaa	cggtaaaggt	660
cgcgacgtat	tgttcttcgt	tgacaacatc	taccgttaca	ctctggccgg	taccgaagta	720
tctgcactgt	tgggcccgtat	gccttctgca	gtgggttacc	aaccgacatt	ggctgaagaa	780
atgggtcggt	tgcaagagcg	tattacctct	acccaaactg	gttccattac	ttcc	834

<210> 757
 <211> 833
 <212> DNA
 <213> *Neisseria weaveri* ATCC 51223

<400> 757						
cccgtgatgc	tattcccatg	tatacgatgc	cctgaaattg	gtagataacg	atctgaccct	60
ggaagtgcaa	caacttttag	gtgatgggtg	ggttcgtacc	attgcaatgg	gtagtccaga	120
cggcctaaaa	cgtgggtatg	ctgttaacaa	taccggcgct	ccgattactg	ttccgggtggg	180
gaaagccacc	ttgggacgta	ttatggatgt	gttgggtaat	ccggttgatg	aagcaggtcc	240
tgttgatca	gaagaaactc	gcgctattca	tcaagctgcc	cctaaatttg	acgaactgtc	300
ttcagcaact	gagttgttgg	aaacaggcat	taaagtaatt	gacttgctgt	gcccgtttgc	360
caaaggtggt	aaagtaggtt	tgtttgggtg	tgccggcgctg	ggtaaaaccg	taaatatgat	420
ggagtgtatc	aacaacatcg	cgaaggcaca	tagtggtttg	tctgtattcg	ccggtgtagg	480
tgagcgtacc	cgtgaaggta	acgacttcta	ccatgaaatg	aaagactcta	acgtattgga	540
taaagtagcc	atggttttatg	gccagatgaa	tgaacctccg	ggtaaccgtt	tgccggttgc	600
tttgactggg	ttgactatgg	ccgaatat	ccgtgacgag	aaagatgaaa	acggcaaagg	660
tcgtgacgtc	ttgttctttg	tggataatat	ctatcgctat	actctggccg	gtactgaagt	720
gtctgcaactg	ttaggtcgta	tgccgtctgc	agtaggttat	cagcctacat	tggcagaaga	780
aatgggtcgc	ttgcaggagc	gtattacttc	tactcaaaca	ggttcgatta	ctt	833

<210> 758
 <211> 833
 <212> DNA
 <213> *Neisseria animalis* ATCC 19573

<400> 758						
cgcgatgcca	ttcctcacgt	ttacgatgcc	ctgaaattgg	acgacaccgg	tctgactttg	60
gaagtacaac	aacttctggg	cgacgggtgtg	gtacgtacca	ttgcaatggg	tagttcagac	120
ggcctgaaac	ggggtttgtc	tgtgagcaat	accggttctc	cgattgccgt	tcctgtcggt	180
aaagcgactt	tgggtcgat	tatggacgta	ttgggcaatc	cggttgatga	agccgggtccg	240
gttgctaccg	aagagaaacg	tgctattcac	caagccgcac	cgaagtttga	tgaattgtca	300
tcagctaccg	agttgttggg	aaccggtatt	aaagtaatcg	acttgctgtg	tccgtttgca	360
aaaggcggtg	aagtaggtct	gttcggcggt	gccggtgtgg	gcaaaaccgt	aaacatgatg	420
gaattgatca	acaacatcgc	caaagcacac	agcggctctg	ctgtgtttgc	cggtgtaggt	480
gaacgtaccc	gcgaaggtaa	cgacttctac	cacgagatga	aagattccaa	cgtgttggtg	540
aaagtagcca	tggtgtacgg	tcagatgaat	gagccgcccg	gcaaccgctt	gcgcgtggct	600
ttgaccggcc	tgactatggc	cgaatacttc	gtgacgaaaa	agacgaaaa	ggcaaagggtc	660
gtgacgtatt	gttcttcgtg	gacaacattt	accgctacac	actggccggg	accgaagtat	720
cagcattgtt	gggcccgtatg	ccgtctgcag	taggttatca	gccgacattg	gcagaggaaa	780
tgggtcgctt	gcaagagcgt	attacctcta	cccaaaccgg	ttcgattacc	tct	833

<210> 759
 <211> 819
 <212> DNA
 <213> *Proteus penneri* ATCC 33519

<400> 759						
agcgtcccta	aagtatacga	cgctcttgag	gttatgaatg	gtaaagaaaa	actggtgctg	60
gaagttcagc	aacagtttag	cgggtggatc	gttcgtttgta	tcgcaatggg	tacatcagac	120


```

ggtttaagcc  gtggcttaaa  agttgaagat  ttaggccacc  caattgaagt  accagtaggt  180
aaagcaacac  tgggacgtat  catgaacggt  ctgggtacac  ctattgatat  gaaaggtgat  240
attgcaactg  aagaacgttg  gtctattcac  cgtgaagcac  caacctacga  agagttatca  300
aactcacaag  aactgcttga  aaccggtatc  aaagtaatgg  acttaatctg  tccggttgct  360
aaaggtggta  aagtaggtct  gttcggtggg  gcgggtgtgg  gtaaaacagt  taacatgatg  420
gaattgatcc  gtaatatcgc  gatcgagcac  tcaggttact  ctgtatttgc  tgggtgttgt  480
gagcgctact  gtgagggtaa  cgacttctat  catgaaatga  cagattctaa  cgttcttgac  540
aaagtatcgt  tagtttatgg  tcagatgaat  gagccaccag  gaaaccgtct  gcgtgtagca  600
ctgactgggc  tgactatggc  tgaaaaattc  cgtgatgaag  gccgtgacgt  actgttatcc  660
gtcgataaca  tttatcggtt  caccttagcc  ggtacagaag  tatcagcact  gttaggtcgt  720
atgccatcag  cggtaggtta  ccagccaaca  ttggctgaag  agatgggtgt  tctgcaagaa  780
cgtatcactt  caacccaaaac  aggttcaatc  acctctgta  819

```

<210> 760

<211> 819

<212> DNA

<213> *Salmonella choleraesuis* subsp. *choleraesuis* ATCC 13076

<400> 760

```

gccgtaccac  gcgtgtacga  tgcccttgag  gtgcagaatg  gtaatgagaa  gctgggtgctg  60
gaagttcagc  agcagccttg  cggcggtatc  gtgcgtacca  tcgcgatggg  gtcttctgac  120
gggtctgcgtc  gcggtctgga  tgtaaaagat  ctccaacacc  cgatcgaagt  cccggttaggt  180
aaagccacgc  tgggtcgtat  catgaacgtc  ctgggcgaac  cggtcgacat  gaaaggcgag  240
atcggcggaag  aagagcgttg  ggcgattcac  cgcgcagcac  ctccctacga  agagttgtca  300
aactctcagg  aactgctgga  aaccggtatc  aaagttatcg  acctgatgtg  tccgttcgag  360
aagggcggtg  aagtcggtct  gttcgggtgg  gcgggtgtag  gtaaaaccgt  aaacatgatg  420
gagcttatcc  gtaacatcgc  gatcgagcac  tccggttact  cagtgtttgc  gggcgtaggg  480
gaacgtactc  gtgagggtaa  cgacttctac  cagcaaatga  ccgactccaa  cgttatcgat  540
aaagtatccc  tgggtgatgg  ccagatgaac  gagccgcggg  gaaaccgtct  gcgcgttgca  600
ctgaccgggc  tgaccatggc  ggagaaattc  cgtgacgaag  gtcgtgacgt  actgctgttc  660
gtcgataaca  tctatcggtt  caccctggcc  ggtacggaag  tatccgact  gctgggcccgt  720
atgccttccg  cagtaggtta  ccagccgact  ctggcggaag  agatgggctg  tctgcaggaa  780
cgtatcacct  ccacccaaaac  cggttctatc  acctccgta  819

```

<210> 761

<211> 812

<212> DNA

<213> *Yersinia pestis* strain KIM D27

<400> 761

```

accaaaagtg  tacaacgccc  ttgaggtaga  aggtacaact  gaaaagttag  tgctggaagt  60
tcagcaacag  ttgggcgggt  gtgttggtcg  ttgtatcgca  atgggctctt  ccgatggctc  120
gagccgtggg  ttgaaagtaa  ccaacctaga  acaccgatc  gaagtaccgg  ttggtaaaag  180
gacccttggc  cgtatctaga  acgtattggg  tgaaccaatc  gacatgaaag  gtcctatcgg  240
tgaagaagag  cgttgggcaa  tccatcgcca  agcgccttct  tatgaagagc  ttgctagctc  300
acaagatctg  ttagaaaccg  gtatcaaggt  tatggacctg  atttgtccgt  ttgctaaggg  360
cggtaaagtc  ggtctgttcg  gtggtgcggg  tgtaggtaaa  acagtaaaac  tgatggagct  420
gatccgtaac  atcgcgatcg  agcactctgg  gtattctgta  tttgccgggt  taggtgagcg  480
taccctgtag  ggtaatgact  tctaccatga  aatgactgac  tccaacgttt  tggacaaagt  540
atccttgggt  tacggccaga  tgaatgagcc  accaggtaac  cgtctacgcg  ttgcactgac  600
cggcctgacc  atggcggaga  aattccgtga  tgaaggtcgt  gacgtactgc  tgtttatcga  660
taatatctat  cgttataccc  tagctggtag  ggaagtatcc  gcattgctgg  gtcgtatgcc  720
atcagcggtg  gggtatcagc  caacactggc  tgaagagatg  ggtgtgttgc  aggaacgtat  780
tacttccact  aagacgggtt  caatcacctc  tg  812

```

<210> 762

<211> 408

<212> DNA

<213> *Burkholderia mallei* strain GB8

<400> 762

```

cgacgtgatc  gagcccttct  tcgtcgacgt  gatgcgctct  tgcagcttgc  ccatttcttc  60
agccagcgtc  ggctgatagc  ccactgccga  cggcatacgg  ccgagcagcg  ccgacacttc  120

```

```
ggtaccggcc agcgtgaaac ggtagatggt gtcgacgaag aacagcacgt cgaggcccttc 180
gtcacggaag tgctcgccca tcgtgaggcc cgtcagcgcc acgcgcagac gggtgcccgg 240
cggctcgttc atctggccgt acaccagcgc gaccttgctg agaacgttcg agtccttcat 300
ttcgtggtag aagtcgttcc cttcacgggt acgctcgccc acgcccgcga acacggagta 360
accgccgtgc tccttcgcga tggtgttgat gagctccatc atgttgac 408
```

<210> 763

<211> 400

<212> DNA

<213> *Clostridium sordellii* ATCC 9714

<400> 763

```
gaacttataa acaacatagc tactcaacat ggtgggtatat cagtattcgc aggtggttga 60
gagagaacaa gagaaggtaa cgacctttac ggagaaatga gtgagtcctgg agttataaac 120
aagacagctc tagtattcgg acaaatgaat gagccacctg gagcaagaat gagagttgct 180
ttaactgggtc ttacaatggc tgaatatttc agagatcaag aaggacaaga cgttttatta 240
ttcgtagata atatatcccg tttcactcaa gcaggatctg aggtttctgc acttcttgga 300
cgtactccat cagcagttgg ataccaacca acattagcta cagagatggg tagattacaa 360
gagagaataa catctacaaa taaaggggtct ataacatcag 400
```

<210> 764

<211> 405

<212> DNA

<213> *Clostridium novyi* ATCC 19402

<400> 764

```
ttaattcaag aattaatcaa caatatagcg aaggaacacg gtggattatc tgtatttaca 60
ggagttggag aaagaacaag agaaggtaat gacctttact atgaaatgaa agaatctggg 120
gttataaata aaacagcact agtatttggt caaatgaatg agccacctgg agcaagaatg 180
agagttgctc ttacaggact tactatggca gaatatattca gggatcaagg acaaaacgta 240
cttttattca tagacaacat atttagattc actcaagcag gttcagaggt gtcagcttta 300
cttgggaagaa tacctagtgc cgttgggatac caaccaacac tagcaacaga aatgggtgcg 360
cttcaagaaa gaataacatc tacaagcat ggttctataa catca 405
```

<210> 765

<211> 393

<212> DNA

<213> *Clostridium botulinum* strain 20:3.1

<400> 765

```
aattaataaa taacatagct aaagaacatg gtggattatc agtggtttact ggagttggag 60
aaagatctag agaaggtaat gatctttatc atgaaatgag agaatcaggc gttatagata 120
aaaccgcatt agtatttggt caaatgaatg agccacctgg tgctagaatg agagttgcat 180
taacagggtt aactatggct gaatatattt gagataaagg tcaagatgta ttactattta 240
tagataatat atttagattt actcaagctg gatcagaagt ttcagcatta cttggaagaa 300
taccatcagc agttgggttac caaccaactt tagcaactga aatgggtgca cttcaagaga 360
gaattacatc aactaagaat ggttctataa cat 393
```

<210> 766

<211> 399

<212> DNA

<213> *Clostridium histolyticum* ATCC 19401

<400> 766

```
aggaacttat aaataatatt gcaaaacaat atggaggtct atctgtattt acagggtgttg 60
gtgaaagaac aagagaaggat aatgacctat ataatgaaat gaaagattct ggggttatag 120
agaaaactgc actagtattt ggacagatga atgaaccacc aggagcgaga atgagagtag 180
cattgacagg acttactatg gcagaatatt ttagagatca agggcaagat gtacttttat 240
ttatagataa tatattttaga tttacgcagg ctggttctga agtttctgca ttgttaggaa 300
gaattccaag tgcagttgga tatcaaccaa cccttgcaac tgaaatgggt gcattacaag 360
aaagaataac atccacaaaa aatggatcaa ttacttcag 399
```

<210> 767
 <211> 390
 <212> DNA
 <213> *Peptostreptococcus prevotii* ATCC 9321

<400> 767
 catgatggaa ctgatccgta acatcgccat cgagcacagc gggtattccg tgttcgcccg 60
 tgtgggtgag cgtactcgtg agggtaacga cttctaccac gagatgaagg actccaacgt 120
 tctggacaaa gtggcactgg tctacgggtc gatgaacgag ccgccgggta accgtctgcg 180
 cgtagcactg actggcctga ccatggccga gaagttccgt gacgaaggta acgacgttct 240
 gttgttcgtc gacaacatct accgttacac cctggccggg actgaagtat ccgcactgct 300
 gggccgtatg ccttcggcag taggttacca gccgaccctg gctgaagaga tgggcgttct 360
 gcaagaacgt atcacttcga ccaaggaagg 390

<210> 768
 <211> 953
 <212> DNA
 <213> *Absidia corymbifera* ATCC 46775

<400> 768
 aggtcttggt cgtggcaaaa ggctattgac actgggtgctc ctatcaccat tcctgttggt 60
 aacgaagtcc ttggtcgtat cattaacgtc attgggtgagc ccattgatga gcgtgggtccy 120
 atcaagtcca agggcactcg tgctatccac gctgatgctc ccgagttcgt tgatcaatcc 180
 cccactcccc agattctcga gactgggtatc aagggttgctg atttgcttgc tccctatgct 240
 cgtgggtgga agattgggtc ttccgggtggg gccgggtgctg gcaagactgt cttgattcaa 300
 gaattgatca acaacattgc caaggtcac ggtgggttact ctatcttctg tgggtgctggg 360
 gaacgtactc gtgaaggcaa cgatttggtac cagcaaatga ttccactgg tgatcatcaag 420
 cttgaagggtg aatccaagtg tgctcttgctc ttgggtcaaaa tgaacgaacc ccccgagct 480
 cgtgcccgtg ttgccttgac tgggttgacc attgccgaat acttccgtga tgaggaagg 540
 caagatgtgt tgctcttcat tgacaacatt ttccgtttca ctcaagccgg ttctgaagtg 600
 tccgctttgc ttggtcgtat tccctctgct gtcgggttacc aaccactctc ytccactgat 660
 atgggtggta tgcaagagcg tattactacc accaagaacg gttccattac ctccgtgcaa 720
 gctgtctacg tccctgctga cgatttgact gatcctgctc ctgctactac ttttgctcac 780
 ttggacgcca ccactgtgtt gtctcgttcc attgctgagt tgggtatcta cctgctgtc 840
 gatccccttg actccaagt ccgatatctg gatccccgta tcgttggtga tgagcactac 900
 tctgttgcca ctgggtgtcca acaaactcct caaaactaca agtcgcttca aga 953

<210> 769
 <211> 1343
 <212> DNA
 <213> *Alternaria alternata* ATCC 62099

<400> 769
 cgcggttcca agggcaccca caccggtgcc cccatcaaga ttcccgttgg tcacggtacc 60
 cttgggtcgt tcatgaacgt cactggtgac ccattgacg agcgtgggtcc catcaaggcc 120
 accaagtacg ctcccattcca cggcgacccc ccgagttcca ccgagcaatc cacctccgct 180
 gaggtcctcg ttaccgggtat caagggtgtc gacctgttgg ctccttacgc tcgtgggtgga 240
 aagattgggtc tcttcggagg tgctgggtgct ggaaagactg tcttcattca ggagctgatt 300
 gtaaggagac acactgtcta ctggctgagc attagctaac ggcaggcaga acaacatcgc 360
 caaggcccac ggtgggtttct ctgtcttcac tgggtgctggg gacggtaccc gtgagggtaa 420
 cgatctgtac cagagatgc agggagacttc cgtcattcag cttgacgggtg actccaagg 480
 cgccctcgtc ttccggtcaga tgaacgagcc cccgggtgcc cgtgcccgtg tcgctcttac 540
 tggctcttact gttgctgagt aagtcttgaa ttactgtgt tgacaacgtc gtgggtaattg 600
 ggaaaaaaga tacttccgtg acgaagaggg acaggatgtg cttctcttca tcgacagtaa 660
 gtgcttggtac gaactgcctg tgagacatac actgacttcg gcaatagaca ttttccggtt 720
 caccagggcc ggttccgagg tgtccgctct tcttggtcgt atccccctcg ccgtcggtaa 780
 ccagcccacc ctccgcatcg acatgggtgt catgcaggag cgtattacca ccaccacaa 840
 gggttccatc acctccgtcc aggcgttcta cgtgcccgtg gacgatttga ctgaccctgc 900
 ccccgccacc accttcgccc atttgagcgc caccactgtc ttgtcccgtg gtatctccga 960
 gttgggtatc taccgccgccc tcgaccctct tgactccaag tcccgtatgt tggacccccg 1020
 tgtcattgggt caggaccact acgacaccgc caccgcggt cagcagattc tccaggagta 1080
 caagtgcctc caggatatca ttgccattct cggtatggac gagttgtcgg aagctgacaa 1140
 gcttaccgtc gagcgtgccc gtaagatcca gcgtttcttg agccagcctt tcgctgtcgc 1200
 ccaggctctc actggtattg agggcaagct tgtcgacctc aaggacacca tccgatcatt 1260

caaggctatc ttgactgggtg aggggtgacga ccttcccag ggtgagtctc gactatctcc 1320
gcattcatag cgtataactg aca 1343

<210> 770
<211> 480
<212> DNA
<213> *Aspergillus flavus* ATCC 26947

<400> 770
ttcaggaggtt gattgtatgt tcacctgcaa cataagactt cccattctcc actcttttct 60
aactcttcac agaacaacat tgccaaggct cacgggtggtt actctgtctt cactgggtgtc 120
ggtagagcgtg cccgtgaggg taacgatctg taccacgaaa tgcaggagac tgggtgcatt 180
cagctcgagg gtgaatctaa ggtcgccctt gtcttcgggtc agatgaacga gccccaggt 240
gccccgtgcc gtgtcgccct taccgggtctg accatcgccg agtacttccg tgacgaggaa 300
ggtcaggatg tgctgtctct cattgacaac attttccgtt tcaccaggc cggttctgag 360
gtgtctgccc ttcttggtcg tatccctcc gctgtcggtt accagcccac tctggccgtc 420
gacatgggtg gtatgcagga gcgtattacc accaccacca agggttccat tacctccgtc 480

<210> 771
<211> 1174
<212> DNA
<213> *Mucor circinelloides* ATCC 38592

<220>
<221> misc_feature
<222> (156)..(157)
<223> n represents any nucleotide

<400> 771
ctcgaacaag ayaacttgcc ygccattttg aacgcccttg aagtcaagga ycactctggt 60
ggacgtctcg tyctcgaagt ctctcaacat ttgggtgaga acactgtccg tactattgct 120
atggatggta ctgaaggtaa gttatgtyca tcccanngga tacagtcara cagmaatgtc 180
tagtggttat agcagyagca gatgattgac caatattgta ggtcttggtcc ggtgggtcaa 240
aggttgttga cactgggtgct cccattacca tccccgttg taaggaagtc cttgggtcgta 300
tcatcaacgt tattgggtgaa cccattgatg aacgtgggtcc cattgacgcc aagactcacc 360
gtcctattca cgctgaagct cccgaattcg ttgatcaatc cccactccc gaaatcctcg 420
agactgggtat caaggtygtc gatattgttg ctcttatgc tcgtgggtgg aagattgggtc 480
tcttcgggtg tgctgggtgtc ggtaagactg tcttgattca agaattgatt aacaacatyg 540
ccaaggctca cgggtggttac tctatcttct gtgggtgtcgg tgaacgtact cgtgagggta 600
acgatttgta ccatgaaatg attgaaaccg gtgtcattca attggaaggc gagtccaagt 660
gtgtctctcg ctttgggtcaa atgaacgaac ccccagggtg tcgtgcccgt gtcgctttga 720
ctgggttgac tattgctgaa tacttccgtg atgatgaggg tcaagatgtc ttgcttttca 780
ttgataacat tttcagattc actcaagctg gttctgaggt atctgccctt ttgggtcgta 840
ttccttccgc tgctcggttac caaccactc tttccacyga tatgggtggg atgcaagagc 900
gtattactac caccaagaac ggttccatta cctccgtcca agctgtctac gtcctgtctg 960
atgatttgac cgatcctgct cctgccacca cttttgctca cttggatgcc accactgtct 1020
tgtctcggtc catcgctgaa ttgggtatct aycccgtgt cgatcctctt gattccaagt 1080
ctcgtatcct cgatcccgt attgtcgggt atgagcacta caagggtgcc actgaagtgc 1140
aacaatcct ccaaaactac aagtctctcc aaga 1174

<210> 772
<211> 467
<212> DNA
<213> *Piedraia hortai* ATCC 24292

<400> 772
aggagcttat caacaacatc gccaaaggctc acgggtgggtta ctccgtcttc actgggtgtcg 60
gtgagcgtac tcgtgaggggt aacgatttgt accacgagat gcaagagact tccgtcattc 120
agcttgacsg cgagtccaag gtcgctctcg tggtcgggtca gatgaacgag cccccgggtg 180
cccgtgcccc tggtgccctg actggtctta ccatcgctga gtacttccgt gatgccgagg 240
gtcaggatgg taagtcttat aactcttggtc gcaaagggtt cattctgggtc gctaacttgc 300
tcagtgtccc tggtcatcga caacattttc cgtttcaccc aggtctgggtat ggaggtgtct 360
gccctcctcg gtcgtattcc ttctgccgtc ggttaccaac ctactctcgc cgtcgacatg 420

ggtgggtatgc aagagcgtat taccactacc aagaagggat ccattac

467

<210> 773
<211> 578
<212> DNA
<213> *Pseudallescheria boydii* ATCC 44331

<400> 773
ttgccaaggc ccacgggtggt tactctgtct tcaactgggtg cgggtgagcgt acccgtgagg 60
gtaacgatct gtaccacgaa atgcaggaaa cctccgctcat tcagcttgat ggcgagtcca 120
aggctcgctt tgtcttcggg cagatgaacg agccccctgg tgcccgtgct cgtgtcgctc 180
ttactgggtc taccggttgcc gagtacttcc gtgatgagga ggggtcaggat ggtaagttat 240
atcgttttta ttatcttctt tgccaccacc cctctacgaa tccatgcctc cgttgggtgaa 300
ggcatcgttt gtagggcggg tcggagtttg cggcaatttc tgccgtcggc ttgaagccgc 360
ggatgccccg tgtttgacgc gtatcgatgc taacaacaat gacaacagtg cttctcttca 420
ttgacaacat tttccgattc acccaggccg gtcccagggt gtctgccctt ctcgggtcgta 480
ttccctctgc cgtcggttac cagcccactc ttgccgtaga catgggtgcc atgcaggaac 540
gtattaccac caccaagaag gggttcgatta cctccgctc 578

<210> 774
<211> 1123
<212> DNA
<213> *Rhizopus oryzae* ATCC 56015

<400> 774
aacttaccyg ctatcttgaa cgctctcgaa gtccaagatc actctgggtgg acgtcttgtc 60
cttgaagttc gctcaacact tgggtgaaaa tactgtccgt actattgcta tggatgggtac 120
tgaaggtaag ctatactata accgktktat ccgagtatga tattaacttg aaaaaaggctc 180
tcgtycggtg tcaaaaagggtt attgacactg gtgtcccat taccattcct gytggtaagg 240
aagttctcgg tcgtatcatt aacgtcattg gtgaacccat cgatgaacgt ggtcctatca 300
acgccaagag ccaacgtccc attcacgcgc aagctcccga attcgttgac caatctccta 360
ctcccgaaat tcttgaaact ggtatcaagg ttgtcgactt gttggctcct tatgtctctg 420
gtggtaagat tgggtcttttc ggtgggtgctg gtgtcggtaa gactgtgttg attcaagaat 480
tgattaacaa catcgccaag gctcacgggtg gttactctat tttctgtggg gtcgggtgaa 540
gtactcgtga aggtaacgat ctttaccacg aaatgattga aactgggtgtc atcaagctcg 600
atgggtgact caagtgtgct cttgtctttg gtcaaatgaa cgaaccccca ggagctcgtg 660
cccgtgttgc cttgactggg ttgaccattg ctgaatactt ccgtgatgat gaagggtcaag 720
atgtgttgc tttcattgat aacattttcc gtttcaccca agctgggttcw gaagtatctg 780
cccttttggg tegtattccc tccgtgtcgc gttacccaac cactctttct actgatattg 840
gtggatgca agaacgtatt acaaccacca agaacgggtc cattacatcc gtccaagctg 900
tctacgtccc tgetgatgat ttgaccgatc ctgtcccgc caccactttt gctcacttgg 960
atgccaccac tgtcttctct cgttccattg ccgaattggg tatttaccct gccgtcgatc 1020
ctcttgaytc caagtctcgt atcttggatc ctctgatcgt tggtgacgaa cactacaagg 1080
tcgtaccga agttcaacaa atccttcaaa actacaagtc tct 1123

<210> 775
<211> 477
<212> DNA
<213> *Scopulariopsis koningii* ATCC 38745

<400> 775
attcaggagc tcatcaacaa cattgccaa gctcacgggtg gttactctgt gttcactgggt 60
gtcgggtgag gtaccggtga gggtaacgat ctgtaccacg aaatgcagga gacttcgggtc 120
attcagctcg agggcgagtc caaggctcgc cttgtgttcg gtcagatgaa cgagccccc 180
gggtgcccggt cccgtgtcgc ccttaccggg ctgaccggtt ccgagtactt ccgtgacgag 240
gagggccagg atgggtgagta accgacgaag tctgagatct tgtcgggcat tattctaacg 300
acaactagt cttctcttca tcgacaacat tttccgcttc acccaggccg gttccgagggt 360
gtccgcgctt ctcggccgta tccctctgc cgctcggttac cagcccaccc tggccgtcga 420
catgggagggt atgcaggagc gtattaccac gactcagaag ggctcgatta cctcgggt 477

<210> 776
<211> 610

<212> DNA
<213> *Trichophyton mentagrophytes* ATCC 8125

<400> 776
tccggagttg attgtaagtc atttgaaacc cagccccaag aaacagaagc taggcgaaaa 60
ttggacaatt gagcaattta gccattggag aaaagaaatt tcgagtatta attgttttta 120
tagaacaaca ttgccaaggc tcacgggtgt tactctgtct tcactgggtg cggagagcgt 180
acccgtagag gaaacgatct ctacatgaa atgcaggaga cccgtgtcat tcagcttgat 240
ggcgagtcca aggtcgccct ggtcttcggc cagatgaacg agcccccagg tgcccgtgcc 300
cgtgttgctc ttactggttt gaccattgct gagtacttcc gtgatgagga aggtcaagac 360
ggtgagttty ttatggataa aaratttttt tttttttttt ttttttmaar aaattcatgt 420
tctaacaaag tatatcctag tgcttctctt catcgacaac attttccgtt tcactcaggc 480
tggttccgaa gtgtctgccc tgcttggtcg tatcccatct gccgtcgggt accaaccac 540
tcttgccgtc gacatgggtg gtatgcagga acgtattacc accaccaaga agggatccat 600
tacctccgtc 610

<210> 777
<211> 593
<212> DNA
<213> *Trichophyton tonsurans* ATCC 56185

<400> 777
ggagttgatt gtaagtcatt tgaaaccag cccaagaaa cagaagctag gtgaaaattg 60
gacaattgaa caatttagcc cttggagaaa agaaatttcg agtattaatt atttttatag 120
aacaacattg ccaaggctca cgggtggtac tctgtcttca ctggtgtcgg agagcgtacc 180
cgtgaaggaa acgatctcta ccatgaaatg caggagaccc gtgtcattca gcttgatggc 240
gagtccaagg tcgccctggt cttcggccag atgaacgagc cccagggtgc cegtgcctgt 300
gttgctctta ctggtttgac cattgctgag tacttccgtg atgaggaagg tcaagacggg 360
gagtttctta tggatgaaag attttttttt ttcaagaaat tcatgttcta acaaagtgt 420
ttctagtgtc tctcttcac gacaacattt tccgtttcac tcaggctggg tccgaagtgt 480
ctgccctgct tggtcgtatc ccatctgccg tcggttacca acccactctt gccgtcgaca 540
tgggtgggtat gcaggaacgt attaccacca ccaagaaggg atccattacc tcc 593

<210> 778
<211> 1141
<212> DNA
<213> *Trichosporon cutaneum* ATCC 62965

<400> 778
ccgtgggtcaa gaagttattg aactggtgc cccaattacc attcctgttg gtcgtggtac 60
tcttggtaga attatcaacg tcattggtga accaattgac gaacgtggcc ctatcaaggc 120
ttctaagtat gtcctatcc atactgaacc accaaccctt gctgaacaat ctacttctgc 180
tgaagttctt gaaaccggta tcaagggtgt cgatcttctt gctccttacg cccgtgggtg 240
taagattggg cttttcgggt gtgctggtgt cggtgaagact gtcttcattc aagaacttat 300
taacaacatt gccagggtc acggtggttt ctctgtcttc actggtgtcg gtgaaagaac 360
ccgtgaagggt aacgatcttt accgtgaaat gaaggaaact ggtgtcatca acctcgaagg 420
tgactccaag gtcgtctctg ttttcgggtca aatgaacgaa cctccagggtg cccgtgccc 480
tgtcgctttg actggtctta ccattgccga atacttccgt gatgaagaag gacaagatgt 540
cttgcttttc gttgacaaca ttttcagatt cacccaagcc ggttctgaag tctctgctct 600
tttggtgctg attccatctg ccgtcgggtta ccaacctacc cttgctaccg atatgggtgc 660
cctccaagaa cgtattacca ccacccaaaa gggttccgtc acatctgtcc aagccgtcta 720
tgtcccagca gacgatttga ctgatectgc cccagccacc actttcgtc acttgacgc 780
caccactgtc ttgtctcgtt ccatttccga attgggtatc taccagctg tcatctctct 840
cgattccaag tctcgtcttt tggatcctga agttattgga cacgaacact acgaagtgtc 900
cactcaagtt caacaaaccc tccaagctta caagtctctc caagatatca ttgccatttt 960
gggtatggat gaattgtctg aagctgataa gcttactgtc gaacgtgccc gtaagatcca 1020
aagattcctt tcccaacat tcgctgttgc cgaagtttct actggtatcg aaggtcgtct 1080
cgttccattg aaggaaacgg tcagatcttt caaggaaatc cttgaaggta agtacgatca 1140
c 1141

<210> 779
<211> 1093
<212> DNA

<213> Cladophialospora carrionii ATCC 22864

<400> 779

gctgaaggcc	gaacgtgagc	gtggtatcac	catcgatatc	gcgctctgga	agttcgagac	60
tccaagtac	tctgtcaccg	tcatcgatgc	ccctgggtcat	cgtgacttca	tcaagaacat	120
gatactgggt	acctcccagg	ctgattgtgc	tattctcatc	attgccgctg	gtactgggtga	180
gttcgaggcc	ggatatctcca	aggatggcca	gacctgtgag	catgctctgc	tgcctacac	240
cctgggcgtg	aagcagctta	tctgtcgccat	caacaagatg	gacaccacca	aatgggtctga	300
ggatcggtttc	aacgaaatca	tcaaggagac	ttccaacttc	atcaagaagg	tccgatacaa	360
ccccaaagtc	gttccattcg	tgtccatctc	cgggttcaac	ggtgacaaca	tgatcgacgt	420
ctccaccaat	gccccctggt	acaagggtg	ggaaaaggag	tccaaggctg	gcaaggccac	480
cggcaagacc	ctccttgagg	ctatcgactc	catcgaccct	cctgtctctg	ccaccgacaa	540
gcctctccgt	ctcccactcc	aggatgtcta	caagatttct	ggtatcgcca	cgggtgcccgt	600
cggctcggtt	gagactggta	ccatcaaggc	cggatgggtc	gtcacctttg	cccccgccaa	660
cgtcaccact	gaagtcaagt	ccgtcgaaat	gcaccacgaa	cagctcgcgc	agggcggttc	720
gggtgacaac	gtcggcttca	acgtcaagaa	cgtctccgtg	aaggagggtt	gtcgtggaaa	780
cgttgctggg	gactccaaga	acgaccccc	caagggtgcc	gactccttca	acgcccagggt	840
catcgctctc	aaccacctg	gtcagggtcg	tgtgtgctac	gccccgggtc	tggattgcca	900
caactgcccac	attgcctgca	agttctctga	gtcctctcgag	aagatcgatc	gtcgtaccgg	960
caagtccatg	gaaaacaacc	ccaagttcat	caagtctggt	gatgctgcca	tctggaagat	1020
ggttcccagc	aagcctatgt	gcgttgaggc	tttcaccgac	tacctctctc	ttggctcgttt	1080
gcgcgtccgt	gac					1093

<210> 780

<211> 752

<212> DNA

<213> Cunninghamella bertholletiae ATCC 42115

<400> 780

tacttgtaaa	tggtctcaag	atcgttacaa	cgaaattggt	aagggaagttt	cttccttcat	60
caagaagatt	ggttacaatc	ctaaatccgt	tcttttcgty	cctatctctg	gttggcacgg	120
tgataacatg	ttggaagctt	ctaccaacat	gccttggtac	aagggatgga	ccaaggaaac	180
taaagctggg	tcttccactg	gtaagactct	cttagaagcc	attgacagca	ttgaacctcc	240
taccgcctct	tctgacaagc	ctttacgtct	tcttttacia	gatgtttaca	agattgggtg	300
tatttggtact	gtccctggtg	gtcgtgttga	aactgggtgc	atcaaggctg	gtatgggtgt	360
tacyttcgct	cccgttaacg	tcaccactga	agttaagtcc	gttgaaatgc	atcacgaaca	420
attagaacaa	ggtgttcctg	gtgacaacgt	tggtttcaac	gtcaagaacg	tttccgttaa	480
ggatatccgt	cgtggtaacg	tctgttccga	ctccaagaac	gaccccgcta	aggaatctgc	540
ttccttcaac	gtcgaagtta	tctgttccga	ccaccctggt	caaattgggtg	ctgggttatgc	600
cccagttctt	gactgtcaca	ctgctcacat	tgcttgtaag	ttcgtgtaat	tattagaaaa	660
gatcgatcgt	cgttccggta	agaaactcga	agatgctcct	aaattcggtta	aatctgggtga	720
ctctgctatc	gttaagatgg	ttccttccaa	gc			752

<210> 781

<211> 728

<212> DNA

<213> Curvularia lunata ATCC 26425

<400> 781

caagtgggtct	gaggaccgtt	accaggaaat	catcaaggag	acctccaact	tcatcaagaa	60
ggtcggctac	aacccccagc	acgttccctt	cgtccccatc	tccggtttca	acggagacaa	120
catgattgag	gcttccacca	actgcccctg	gtacaagggt	tgggagaagg	agaccaaggc	180
caaggccact	ggtaagaccc	tcttgaggc	catcgacgcc	atcgaccctc	ctgtccgtcc	240
taccgacaag	ccccctcgcc	ttccccctcca	ggatgtttac	aagattgggtg	gtattggcac	300
ggtccccgctc	ggtcgtgtcg	agaccgggtat	catcaagccc	ggtatgggtcg	tcaccttcgc	360
ccccgctggg	gtcaccaccg	aagtcaagtc	cgtcgagatg	caccacgagc	agcttactga	420
gggtgtcccc	ggtgacaacg	tccgcttcaa	cgtcaagaac	gtctccgtca	aggagatccg	480
tctgtgtaac	gttgccgggtg	actccaagaa	cgaccccccc	aagggtttgcg	agtccttcaa	540
cgccccagggtc	atcgctctca	accaccctgg	tcagggtcgg	gccggttacg	ccccagtcct	600
tgactgccac	actgcccaca	ttgcctgcaa	gttctccgag	ctcctcgaga	agatcgaccg	660
ccgtaccgga	aagtctgttg	agaactcccc	caagttcatc	aagtccgggtg	acgccgccat	720
cgtcaaga						728

<210> 782
<211> 1145
<212> DNA
<213> *Fonsecaea pedrosoi* ATCC 18831

<400> 782
tgaagtccga gcgtagagcgt ggtatcacca tcgatatcgc cctctggaag ttcgagactc 60
ccaagtaagg ctcaacagac acaacaagca aatgcatact cgctaaccta ttcacccacc 120
acagggtacaa cgtcaccgctc attgacgccc ccgggtcaccg tgattttcatc aagaacatga 180
tcaactgggtac ctcccaggct gactgcgcca ttctcatcat tgccgcccgtt actgggtgagt 240
tcgaggccggg tatctccaag gacggtcaga ccggtgagca cgctcttctc gcctacaccc 300
ttggtgtcaa gcagctcatc gttgccatca acaagatgga caccaccaag tgggtctgagg 360
cccgttacca ggagatcatc aaggagacct ccggtttcat caagaaggct ggcttcaacc 420
ccaagcacgt tcccttcgtg cccatctccg gtttcaacgg tgacaacatg atcgacgtct 480
ccaccaactg cccctggtag aagggttggg agaaggagac caaggccaag gccaccggga 540
agacctcct cgaggccatt gacgccatcg acccccacc tcgtcccacc gacaagcccc 600
tccgtcttcc cctycaggat gtctacaaga tcggtggtat tggcacgggt cccgtcgggtc 660
gtgtcgagac cggtaccatc aaggccggca tggtcgtcac cttcgcccc gctgggtgtca 720
ccactgaggt caagtccgtc gagatgcacc acgagcagct tcccagggtt ctccccgggtg 780
acaacgtcgg cttcaacgtc aagaacgtct ccgtcaagga gatccgtcgt ggcaacgtcg 840
ccggtgactc caagaacgac cccccaagg gctgcgacag cttcaacgcc caggtcatcg 900
tccccaacca ccccggtcag gtcggcgccg gctacgcgcc cgtcctcgac tgccacactg 960
ctcacattgc ttgcaagttc tctgagctcc tcgagaagat cgaccgccc accggcaagt 1020
ccattgagggc cagccccaag ttcatacaagt ctgggtgacgc cgccatcgtc aagatgggtc 1080
cctccaagcc tatgtgcgtt gaggccttca ccgactaccc cctcttgga cgtttcgccg 1140
tccgt 1145

<210> 783
<211> 1151
<212> DNA
<213> *Microsporum audouinii* ATCC 11347

<400> 783
gctcaagggt gagcgtgagc gtgggtatcac cattgacatc gccctctgga agttcgagac 60
ccccaaagtac atgggtaccg tcatcggtat gctttatctg tttcccatth atagttgcga 120
caagtaacta ataaaaagta gatgcccccg gacaccgtga cttcatcaag aacatgatta 180
ctgggtacctc ccaggccgac tgcgctattc tcatcattgc tgccgggtact ggtgagttcg 240
aggctggtat ctccaaggat ggccagactc gtgagcacgc cctgctcgtt ttcacctcg 300
gtgtcaagca gctcatcggt gccatcaaca agatggacac caccaactgg tctgagttcc 360
gtttcgggtga aatcatcaag gaagtcacca acttcatcaa gaaggctcggc tacgacccca 420
aggggtgtccc attcgtccca atctctgggt tcaacgggtga caacatgatt gagccctcca 480
ccaactgccc atgggtacaag ggatggaaca aggagaccaa ggccgggtggc aaatcctctg 540
gtaagaccct ccttgaggcc atcgatgcca ttgacatgcc cactcgtccc accgacaagc 600
ctctccgtct cccactccag gatgtctaca agatctctgg tatcggaaca gtaccagtcg 660
gtcgtgttga gactgggtat atcaagcctg gtatgggtgt cactttcgcc cccgccaacg 720
tcaccactga agtcaagtcc gtcgaaatgc accaccagca gctcgttcag ggtgttcccg 780
gtgacaacgt tggcttcaac gtcaagaacg tctctgtcaa ggaagtccgc cgtggtaacg 840
ttgccggtga ttccaagaac gaccacccat ctggctgcgc ctctttcaag gccagggtca 900
tcgtcctcaa ccaccccgcc cagatcggtg ctgggtacgc cccagtcctc gactgccaca 960
ctgcccacat tgcttgcaag ttctctgagc ttcttgagaa gattgaccgc cgtactggta 1020
aatccgtcga aaccagccct aagttcgtca agtctgggtga tgccgctatt gccaccatgg 1080
ttccatccaa gcccatgtgc gttgaggctt tcaactgacta cccaccactt ggtcgtttcg 1140
ccgtccgtga c 1151

<210> 784
<211> 979
<212> DNA
<213> *Mucor circinelloides* ATCC 38592

<400> 784
ccaagtgggtc tcaagatcgt tacaacgaaa ttgtcaagga agtttccgggt ttcatacaaga 60
agatcggttt caaccccaag tccgttcctt tcgttcccat ttctgggtgg cacgggtgata 120
acatgtttgga tgaatccacc aacatgccct ggttcaaggg atggaacaag gagaccaagg 180
ccggttccaa gactggtaag actctcctcg aagccatcga tgccattgag cccctgtcc 240

gtccttctga	caagcctctc	cgtcttcttc	ttcaagatgt	ctacaagatt	ggtggtattg	300
gtacagttcc	cgctgggtcg	gttgaaactg	gtactatcaa	ggctgggtatg	gttgtcaact	360
tcgctcccg	tgctgtcacc	actgaagtta	agtcggttga	aatgcacac	gaaaccctct	420
ctgaaggtct	ccccggtgac	aacgttgggt	tcaacgtcaa	gaacgtctcc	gtcaaggata	480
tccgtcggtg	taacgtctgt	tccgactcca	agaacgatcc	cgctaaggaa	tctgcctctt	540
tcaactgctca	agttattatc	ttgaaccatc	ccggtcaa	ctctgctggt	tacgcaccag	600
ttctcgattg	tcacactgct	cacatcgcc	gtaagttctc	tgaactcatt	gagaagattg	660
atcgctggtc	cggtaagtac	ctgcatctgt	cagaattgaa	ggtccgccgt	tatagcaaag	720
gctgggttta	aatgttgggg	tttgtctgat	ctataatgat	gattgctcct	tcaatttttg	780
acataatttg	atgatctgaa	ttgtgttgct	aacgtcgcat	ttgcttcttt	tgcttctttt	840
gcatgtagg	aagaagatgg	aagatgctcc	caaagtaagt	attacgattg	atggacaatt	900
aaaatagaat	actaacaatt	attgtttata	gttcgtcaag	tctggtgact	ctgctatcgt	960
caagatgggt	ccctccaag					979

<210> 785
 <211> 1099
 <212> DNA
 <213> *Phialophora verrucosa* ATCC 38561

ggacaagctg	aaggccgaac	gtgagcgtgg	tatcaccatc	gatatcgccg	tctggaagtt	60
cgagactccc	aaatacttcg	tcaccgtcat	tgatgcccct	ggcatcgtg	acttcatcaa	120
gaacatgatc	actggtacct	cccaggctga	ttgtgccatc	ctcatcattg	ccgccgggtac	180
cgggtgagttc	gaagccggta	tctccaagga	tgccagacc	cgtgagcacg	ctctcctcgc	240
ctacacccta	ggtgtgaagc	agcttatcgt	cgccatcaac	aagatggaca	ccgccaaatg	300
gtccgaggat	cggttcaacg	aaatcatcaa	ggagacttcc	aacttcatca	agaaggtcgg	360
atacaacccc	aagtccgtcc	cgttcgtgcc	catctccggt	ttcaacgggtg	acaacatgat	420
cgacgtctcc	tccaacgccc	cctggtacaa	gggttgggag	aaggagacca	aggccggcaa	480
ggccactggc	aagaccctcc	tccaggccat	cgacgcgatt	gaccctccta	ctcgtcccac	540
cgacaagccc	ctccgtctcc	ctctccagga	tgtctacaag	atctctggta	tccggcacggt	600
gcccggttgt	cgtgttgaga	ccggtaccat	caaagccggt	atggctcgtca	ccttcgctcc	660
cgccaacgtc	accactgaag	tcaagtcggt	cgaaatgcac	cacgaacagc	tccgcgaagg	720
tggtccaggt	gacaatgtcg	gcttcaacgt	caagaacgtc	tccgtcaagg	agggttcgtcg	780
tggaaacgtt	gccggtgact	ccaagaatga	ccccccaag	ggtgccgact	ccttcaacgc	840
tcaggctcatc	gtcctcaacc	accctgggtca	ggtcggtgcc	ggctacgccc	cgggtcttgg	900
ttgccacact	gcccacattg	cttgcaagtt	ctctgagctc	ctcgagaaga	tccatcgtcg	960
taccggcaag	tccatggaaa	acaaccccaa	gtttatcaag	tctggtgatg	ctgccatcgt	1020
gaagatgggt	cccagcaagc	ctatgtgcgt	tgaggccttc	accgactatc	ctcctcttgg	1080
tcggttcgcc	gtccgtgac					1099

<210> 786
 <211> 750
 <212> DNA
 <213> *Saksenaea vasiformis* ATCC 60625

accaccaagt	ggtctgaggg	ccgttaccag	gagatcatca	aggagacctc	cgyttcatc	60
aagaaggtcg	gcttcaacc	caagcacgtt	cccttcgtgc	ccatctccgg	tttcaacggt	120
gacaacatga	tcgacgtctc	caccaactgc	ccctggtaca	aggggtggga	gaaggagacc	180
aaggccaagg	ccaccggcaa	gaccmtcctc	gaggccattg	acgccatcga	ccccccyagy	240
cgtcccaccg	acaagcccc	ycgtcttccc	ctmcaggatg	tytacaagat	tggcggtatt	300
ggcacgggtt	ccgtcggtcg	tgtygagacc	ggtreccatca	aggggtggcat	ggtcgtcacc	360
ttcccccccg	ctggtgtcac	cactgaggtc	aagtcgctcg	agatgcacca	cgagcagctc	420
gccgagggts	ttccccggtga	caacgtcggc	ttcaacgtca	agaacgtctc	cgtcaaggag	480
atccgtcgtg	gcaacgttgc	cggtgactcc	aagaacgacc	cccccaagg	ctgcgcagac	540
ttcaacgccc	aggatcatcg	cctcaaccac	cccggtcagg	tccggcgccg	ctacgcgccs	600
gtcctsgact	gccacactgc	tcacattgct	tgcaagttct	ctgagctcct	cgagaagatc	660
gaccgcccgt	ccggcaagtc	catcgagttc	ggccccaagt	tcatcaagtc	tggtgacgcc	720
gccatcgtca	agatgggttc	ctccaagccc				750

<210> 787
 <211> 1084
 <212> DNA

<213> *Syncephalastrum racemosum* ATCC 32330

<400> 787

```
gctcaaggcc gagcgtgagc gtggtatcac catcgatata gctctctgga agttcgagac 60
ccccaagtac cacgtcaccg tcattgatgc ccccggccat cgtgatttca tcaagaacat 120
gatcactggt acctcgcagg ctgactgagg tatcctcatc attgccgccg gtactggtga 180
gttcgaggct ggtatctcca aggatggcca gacccgtgag cacgctctgc ttgccttcac 240
cctcggtgtc cgtcagctga tcgtcgccat caacaagatg gactcgacca agtactctga 300
ggcccgttac aacgaaatcg tcaaggaggc ctccaccttc atcaagaaga tcggtttcaa 360
ccccaagtcc gttcccttcg tccccatctc tggctggaac ggtgacaaca tgttgaggga 420
gtcctccaac atgccctggt tcaagggctg gaagaaggag accaaggctg gcgagaagtc 480
cggcaagacc ctctctgagg ccattgacaa cattgacccc ccggtccgtc cctcggacaa 540
gcccctccgt cttcccctcc aggatgtcta caagatcggg ggtatcggca cagtccccgt 600
cggctcgtgc gagactggtg tcatcaaggc tggatggctc gtgaccttcg cccccgcaa 660
cgtcaccact gaagtcaagt ccgtcgagat gcaccacgag cagctcgtcg aggggtgtcc 720
cggtgacaac gtcggtttca acgtcaagaa cgtttccgct aaggatatcc gccgtggtaa 780
cgtctgctct gactccaaga acgaccccgc caaggagtct gcctcgttca ccgcccaggt 840
catcgtcctg aaccaccccgc gtcagatcgg tgccgggttac gcccgggttc ttgactgcca 900
caccgctcac attgcctgca agttcgtcga gctcctcgag aagatcgacc gtcgttccgg 960
yaagaagctc gaagagtcgc ccaagttcgt caagtcgggt gactccgcca tcgtcaagat 1020
ggttccctcc aagcccattg gcgttgaggc ctacactgag taccacctc ttggccggtt 1080
cgcc
```

<210> 788

<211> 1155

<212> DNA

<213> *Trichophyton tonsurans* ATCC 56185

<400> 788

```
gctcaaggcc gagcgtgagc gtggtatcac catcgatata gccctctgga agttcgagac 60
ccccaagtac aatgtcaccg tcattggtat gtttttcttt acctttccc tccatcgtct 120
tgctgtgcca taactaacga gagtagacgc ccccggtcac cgtgacttca tcaagaacat 180
gatcactggt acctcccagg ctgactgtgc tattctcatc attgctgccg gtactggtga 240
gttcgaggct ggtatctcca aggatggcca gacccgtgag cacgctctgc tcgccttcac 300
ccttggtgtc aagcagctca tcgttgccat caacaagatg gacaccacca actgggtccga 360
ggaccgtttc aaggaaatca tcaagggaag caacaacttc atcaagaagg ttgggtacga 420
ccccaagggt gttccattcg ttccaatctc tggtttcaac ggtgacaaca tgattgaggc 480
ctccagcaac tgcccattggt acaagggatg gaacaaggag accaaggccg gtgggtgcca 540
gactggcaag acctyctcg aggccatcga tgccatcgac atgccaaccc gtcctaccga 600
caagccccty cgtctcccac tccaggatgt ctacaagatc tctgggtatcg gaactgtacc 660
agtcggctcg ttgagaccg gtatcatcaa gcctgggtatg gtcgtcacct tcgcccctgc 720
caacgtcacc actgaagtca agtccgtcga aatgcaccac cagcagcttc agcagggtgt 780
ccccgggtgac aacgtcgggt tcaacgtcaa gaacgtttcc gtcaagggaag tccgcccgtg 840
taacgttgcc ggtgactcca agaacgaccc accatccggc tgtgcctcct tcaacgcccc 900
ggtcatcgtc ctcaaccacc ccggccagat ccgtgctggt tacgccccag tccctcgactg 960
ccacactgct cacattgctt gcaagttcgc tgagctcctc gagaagattg accgccgtac 1020
cggtaaatcc gtcgaagcca accccaagtt cgtcaagtct ggtgatgccg ctatcgccaa 1080
gatgggtccc tccaagccca tgtgcgttga ggctttcact gactaccccc cacttggtcg 1140
tttcgccgctc cgtga
```

<210> 789

<211> 1138

<212> DNA

<213> *Trichophyton mentagrophytes* ATCC 8125

<400> 789

```
tcaaggccga gcgtgagcgt ggtatcacca tcgatatcgc cctctggaag ttcgagaccc 60
ccaagtacaa tgtcaccgctc attggtatgt ttctctttac ctttcccctc catcgtcttg 120
ctgtgccata actaacgaga gtagacgccc ccggtcaccg tgacttcatc aagaacatga 180
tcaactggtac ctcccaggct gactgtgcta ttctcatcat tgctgccggg actggtgagt 240
tcgaggctgg tatctccaag gatggccaga cccgtgagca cgctctgctc gccttcaccc 300
ttggtgtcaa gcagctcatc gttgccatca acaagatgga caccaccaac tgggtccgagg 360
accgtttcaa ggaaatcatc aaggaagtca ccaacttcat caagaagggt ggctacgacc 420
ccaagggtgt tccattcgtt ccaatctctg gtttcaacgg tgacaacatg attgaggcct 480
```

ccaccaactg	cccatggtac	aagggatgga	acaaggagac	caaggccggt	ggtgccaaaga	540
ctggcaagac	cctcctcgag	gccatcgatg	ccatcgacat	gccaacccgt	cctaccgaca	600
agcccctccg	tctcccactc	caggatgtct	acaagatctc	tggatcggga	actgtaccag	660
tcggctcgtg	tgagaccggt	atcatcaagc	ccggtatggt	cgtcaccttc	gcccctgcca	720
acgtcaccac	tgaagtcaag	tccgtcgaaa	tgcaccacca	gcagcttcag	cagggtgtcc	780
ccggtgacaa	cgtcggcttc	aacgtcaaga	acgtttccgt	caaggaagtc	cgccgtggta	840
acgttgccgg	tgactccaag	aacgaccac	catccggctg	tgcttccttc	aacgcccagg	900
tcctcgtcct	caaccacccc	ggccagatcg	gtgctgggta	cgccccagtc	ctcgactgcc	960
acactgctca	cattgcttgc	aagttcgtcg	agctcctcga	gaagattgac	cgccgtaccg	1020
gtaaattccgt	cgaagccaac	cccaagtctc	tcaagtctgg	tgatgccgct	atcgccaaga	1080
tggttccatc	caagcctatg	tgcgttgagg	ctttcactga	ctacccccca	cttggtcgc	1138

<210> 790

<211> 748

<212> DNA

<213> *Bipolaris hawaiiensis* ATCC 26067

<400> 790

caccaccaag	tggtctgagg	agcgttacca	ggaaatcatc	aaggagacct	ccaacttcat	60
caagaagggt	ggctacaacc	ccaagcacgt	ccccttcgtc	cccattctctg	gtttcaacgg	120
agacaacatg	attgaggctt	ccaccaactg	ccctctggtag	aagggttggg	agaaggagac	180
caaggccaag	gccactggta	agacccttct	cgaggccatc	gacgccatcg	acccccctgt	240
ccgtcctacc	gacaagcccc	tccgccttcc	cctccaggat	gtgtacaaga	ttggtgggtat	300
tggtcaccgt	cccgctcggtc	gtgtcgagac	cggtatcatc	aagcccggta	tggtcgtcac	360
cttcgcccc	gctgggtgtca	ccactgaagt	caagtccgtc	gagatgcacc	acgagcagct	420
tgccgagggg	gtccccgggtg	acaacgtcgg	cttcaacgtc	aagaacgtct	ccgtcaagga	480
gatccgtcgt	ggtaacgttg	ccggtgactc	caagaacgac	ccccccaagg	gttgcgagtc	540
cttcaacgcc	caggtcatcg	tcctcaacca	ccccgggtcag	gtcgggtgccg	gttacgcacc	600
agtccttgac	tgccacactg	cccacattgc	ttgcaagttc	tccgagctcc	tcgagaagat	660
tgaccgccgt	accggaaggt	ctggttgagaa	ctcccccaag	ttcatcaagt	ccggtgacgc	720
cgccatcgtc	aagatgggtc	cctccaaag				748

<210> 791

<211> 958

<212> DNA

<213> *Aspergillus fumigatus* ATCC 14110

<400> 791

cgctattgtc	gttggttgcg	cctccgacgg	tcagatgtag	gtggaacatc	ttgggaaata	60
cgctcgtaaaa	cacggcgctt	acgtttttcg	gaataggccc	cagactcgtg	agcatttgct	120
gctcgcccg	caggttggtg	tccagaagat	cgttgtcttc	gtcaacaaaa	tcgatgctat	180
tgatgatccg	gagatgctgg	aactgggtcg	actcgagatg	cgtagactgc	tgaacagcta	240
cggtttcgag	ggtgaagaga	ctccgatcat	tttcggttcc	gctctctgtg	ctctcgaagg	300
acgcccgtgac	gacatcggtg	aagacagaat	tgagcagctt	atgaacgctg	tcgacacctg	360
gatccccact	cctcagcgtg	acctcgacaa	acctttcttg	atgtctgtcg	aggaagtgtt	420
ctctatcgcc	ggccgtggta	ccgtggcttc	tggtcgtgtc	gagcgtggta	tcttgaagaa	480
ggactctgag	gttgagattg	ttggaggctc	cttcgaaccc	aagaagacca	aagtcaccga	540
cattgaaacc	ttcaagaaga	gctgtgatga	atcgcgtgct	ggtgacaact	ctggtctcct	600
cctgcgtggt	atccgacgtg	aagacgtcaa	gcgtgggtatg	gtcattgctg	ttcccggcag	660
caccaaagct	cacgacaagt	tcctcgtctc	catgtacgtc	ctgaccgagg	cggagggttg	720
tcgtcgtact	ggcttcgggtg	ccaactaccg	tcccacagtc	ttcatccgta	ctgcaggtaa	780
gttcccgcac	accgtgtcca	gatcttccga	gagattagcg	atatatgcta	atgattcatc	840
agacagggtc	gcttccctca	gcttccctga	cggcgaccaa	tctcgagag	ttatgcctgg	900
tgacaacgtc	gagatgatcc	tgaagaccca	ccaccctgtt	gctgctgagg	ctggtcaa	958

<210> 792

<211> 936

<212> DNA

<213> *Trichophyton mentagrophytes* ATCC 8125

<400> 792

cgttgtcgca	gcttctgacg	gtcaaagtga	attgaatgcc	cgcccagacg	gatgaaagga	60
tttgacgttt	ctaactcatc	tctaggcctc	agaccagaga	acatttgctc	cttgcccgc	120

```

aggctcgggtgt ccagaagctg gtcgtttttcg ttaacaaggt cgatgccggt gaggacccag 180
agatggttgga gcttggtcgaa cttgaaatgc gtgaactcct cagccactac ggtttcgagg 240
gtgaggagac ccccatcatt tttggctctg ctctctgtgc cctcgagtcc cgtcgacctg 300
agcttggtgt cgagaagatt gacgagctat tgaacgccgt cgacacctgg atccccaccc 360
ccgagcgcgc cactgataag cctttcctca tgtccattga ggaagtgttc tctatctctg 420
gtcgtgggtac cgtcgtctcc ggtcgtgttg agcgtgggtat cctcaagaag gattccgacg 480
tcgaaattgt tgggtggctct accacccta tcaagaccaa ggtcacagat atcgaaacct 540
tcaagaagtc ctgcatgaa tctcgagctg gtgacaactc tgggtctcct ctccgaggta 600
tcaagcgtga ggacttgaag cgtggaatgg ttgttgctgc ccccggtacc accaaggctc 660
acaccgactt catgggtctcc ctctacgtcc tgactgagggc tgagggtggc cgttccaacg 720
gcttcaccca caagtaccgc ccccaaagt tcatccgtac tgctgggtatg taacccaagt 780
ttccgctatt tactaagtag atcattgcta acttgatatt cttccgtag acgaagccgc 840
atctttcagc tggcctggag aagaccaaga caagaaggct atgcctgggtg acaacgtcga 900
gatgatttgc aagaccctcc accccattgc tgccga 936

```

<210> 793
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 793
 ttattgttgc tgctgggtact 20

<210> 794
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 794
 gacgacaagt cgggtgaactt 20

<210> 795
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 795
 acttgcaacgc gatgtggcag 20

<210> 796
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 796
 ggtccaatgc cwcaaawag a 21

<210> 797
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 797
cattaagaat ggyttatctg tskctct 27

<210> 798
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 798
tggttgtccc agccgatcgt tt 22

<210> 799
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 799
acctgtgaat acaagcaatc t 21

<210> 800
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 800
gatgaaatct tcaacgaagt tgat 24

<210> 801
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 801
acaacaccga gaagatccca 20

<210> 802
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 802
ttgccatttc tggtttcggt 20

<210> 803
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 803
acttcagtgg taacaccagc 20

<210> 804
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 804
cctgggacgg cctctggcat 20

<210> 805
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 805
ctcttggtcca tcttagcagt 20

<210> 806
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 806
agcatcacca gacttgataa g 21

<210> 807

<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 807
aaagtggctt caaaggttgc

20

<210> 808
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (7)..(7)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (7)..(7)
<223> i

<400> 808
gcnttanwrg cattagaara ycca

24

<210> 809
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 809
tcttcctgtw gcaactgttc ctct

24

<210> 810
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 810
agagmwacag ataarscatt ctta 24

<210> 811
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 811
traartagaa ttgtggtctr tatcc 25

<210> 812
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<400> 812
gtnacnggnt cytyrarrrt nccncc

26

<210> 813
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 813
aatcygtyga aatgcaycac ga

22

<210> 814
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<400> 814
gcnggcacgt acacngcctg

20

<210> 815
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 815
tggtgcatyt ckacrgactt 20

<210> 816
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 816
gctacgacga gatcaagggc 20

<210> 817
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 817
tggaagaagg ccgaggagtt 20

<210> 818
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 818
agccgggctg gatcttcttc 20

<210> 819
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 819
tcgagcttct ggaggaagag 20

<210> 820
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:

Oligonucleotide

<400> 820
gaaggaggtg tctgcttaca c 21

<210> 821
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 821
ggcgcaaacg tcaccacatc a 21

<210> 822
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 822
cggcggatgt ccttaacaga a 21

<210> 823
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 823
gagcggtatg aygagattgt 20

<210> 824
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 824
ggcttctgcg gcaccatgcg 20

<210> 825
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 825
atgagcargc saaccatcgt tcagtg 26

<210> 826
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 826
tcgatcgtgc cgaccatgta gaacgc 26

<210> 827
<211> 446
<212> DNA
<213> Clostridium novyi ATCC 19402

<400> 827
caccaacttg ctaaatgggg agatgccag attggtgtat atataggctg tggagaacgt 60
ggaaatgaaa tgacagatgt tcttaatgag tttccagaac ttaaagatcc taagactggc 120
aaatcaataa tggaaagaac agttttaata gcaaatactt ctaatatgcc agttgcagcc 180
cgtgaagctt gtatatatac aggaatcaca atagcagaat attttagaga tatgggatat 240
tcagtagcac ttatggcgga ttccacttca cgttgggcag aggcattaag agaaatgtct 300
ggaagacttg aagaaatgcc tgggtgatgaa ggttacccag cttatttagg atcaagactt 360
gctgatttct atgaaagagc tggaaaagtt gtgtgttttag gagacgatga aagagaaggt 420
gccattactg caataggtgc tgtatc 446

<210> 828
<211> 445
<212> DNA
<213> Clostridium difficile ATCC 9689

<400> 828
cagcatcagc ttgctaaatg ggcagatgca gatatagttg tatatatagg ctgtggcgag 60
cgtggaaatg aaatgacaga tgttcttctt gaatttcctg aattaaaaga cccaagaaca 120
ggcagagtcac ttatgcaaag aactgtgctt atagcaaata catcagatat gccggttgct 180
gcacgtgaag cttctatata cactggtatt acaatagctg aatatttttag agatatggga 240
tatagtgttg cacttatggc agactctaca tcaagatggg ctgaggctct tagagagatg 300
agtggtcggt tagaggagat gcctggtgaa gaaggttatc ctgcatactt aggttcacgt 360
cttgctcaat tctatgagag agcaggaaag gtaaattgtc taggtatgga tgaaagagaa 420
ggaacactta cagcaattgg tgcag 445

<210> 829
<211> 445
<212> DNA
<213> Clostridium septicum ATCC 12464

<400> 829
atgctatagc taaatgggga gacagcgaaa tagttgttta cgttggatgt ggagaacgtg 60
gtaacgaaat gacagacgtt cttaacgaat tcccagaact tattgaccca aaaactgggg 120
aaagtttaat gaagagaaca gtacttatag ctaatacttc aaacatgcca gttgctgcta 180
gagaagcttg catatacaca ggtattacaa tagctgaata cttcagagat atgggatact 240
cagtatctat aatggctgat tcaacttcaa gatgggcaga agcattaaga gaaatgtcag 300
gtagacttga agaaatgcca ggtgatgaag gatattccagc gtacttagga tcaagacttg 360
ctgattatta cgaaagagca ggtaagggtt tttgtctagg taaagatggt agagaaggtg 420
ctgtaacagc aattggagct gtatc 445

<210> 830

<211> 444
<212> DNA
<213> Clostridium botulinum strain 20:3.1

<400> 830
tcaaattgct aaatgggggag atgcagaaat cgttggtttac gttggatgcg gagaacgtgg 60
taacgaaatg acagacgttg ttaatgagtt cccagaactt attgacccta agactggcga 120
aagcttaatg aagagaacag ttcttatagc taatacttca aacatgccag ttgcagcgag 180
agaagcttca atatatacag gtatcacaat agctgaatat ttcagagata tgggatatgc 240
agtatcaata atggctgact caacttcaag atgggctgag gcattaagag aaatgtcttg 300
tagacttgaa gaaatgcctg gtgatgaagg atatccagct taccttggat caagacttgc 360
tgattactat gaaagagctg gtaagggtga atgttttaggt aatgatggaa gaattggttc 420
tataacagca atcgggtgcg tatc 444

<210> 831
<211> 456
<212> DNA
<213> Clostridium perfringens ATCC 13124

<400> 831
tagttcagca ccaagttgct aaatgggggag atactgagat agttggtttac gttggatgtg 60
gagaacgtgg taacgagatg acagacgttc ttaacgaatt cccagaactt aaagacccta 120
aaactgggga aagcttaatg aagagaacag ttcttattgc taatacatct aacatgccag 180
ttgctgccag agaagcatca atatatactg gtataacaat agcagagtat ttcagagata 240
tgggatactc agtatcaatc atggctgact caacttcacg ttgggagag gctttaagag 300
aaatgtcagg aagacttgaa gaaatgccag gagacgaagg ttaccagca tacttaggat 360
caagacttgc tgattactat gaaagagctg gtaaagttgt agcttttaggt aaagatggaa 420
gagaaggagc tgttacagct atcgggagcag tatccc 456

<210> 832
<211> 444
<212> DNA
<213> Clostridium tetani ATCC 19406

<400> 832
ccaacttgca aaatgggctg atgctcaaat agttgtgtac ataggatgtg gagaacgtgg 60
aaatgaaatg acagacgttt taaatgagtt cccagaatta aaggatccta aaaccgggga 120
atcttttaatg aaaagaactg tgtaaatagc aaatacatct aatatgcctg ttgcagctag 180
agaagcatct atatatactg gtataacaat aggggaatat tttagagata tgggatattc 240
aatagcacta atggcagatt cgacttctag atgggagag gctctaagag aaatgtcttg 300
aagactagag gagatgccag gtgaagaagg ttatccagct tatttaggat ctgatttagc 360
agagttctat gaaagagcag gtaatgttat atgttttaggt caggatggaa gagaaggagc 420
attaacagct ataggagcag tttc 444

<210> 833
<211> 1786
<212> DNA
<213> Streptococcus pyogenes

<400> 833
tgaaccaagg aaaaataata accgtttcgg gacctcttgt tgtggcttct gggatgcaag 60
aagctaatat tcaagatatt tgcgtgtgg gacatcttgg cttagtcgga gaaattattg 120
aatgcgctcg cgatcaagcg tctattcagg tttatgagga aacatcaggg atcgggtccag 180
gagaaccagt agtgactact ggttgctcct tgtcggtcga gttaggcccc ggcctgattt 240
cagaaatggt tgacgggtatt cagcgaccgc ttgatcgttt tcaaaaagca acggacagcg 300
actttttaat ccgtggtgtg gctatcccaa gtcttgatcg aaaggctaag tgggcattta 360
ttcccaagct aagtgttggt caagaagtag ttgcagggtga tatttttagga actgtgcaag 420
aaacagctgt cattgagcac cgtatcatgg ttccttataa agtttcaggg accttggttg 480
ctattcatgc aggggacttc acagtaacag atacagttta tgaaattaag caggaagacg 540
gtttccattta ccaaggtagc ctcatgcaga ctgggcaggt tcgtcaaagt cgccctgttg 600
ctcaaaaagct tatcccagtc gaaccttttg ttacagggtca acgggttatt gacacctttt 660
tccctgttac aaaagggtgg gccgctgccg ttctgggacc atttgggggca ggaaaaacag 720
ttgtgcagca tcaaatagct aaatttgcca acgttgatat tgttatttat gtcggttgtg 780

```

gggaacgcgg caacgagatg accgacgttt tgaatgagtt tccagagtta attgacccaa 840
atacaggcca gtccattatg gagcgcacgg tgtaattgc aaacacctct aatatgccag 900
tagcagcgcg tgaagcgctg atttacacag gtattacat tgccgaatat ttccgtgata 960
tgggctattc tgtggctatc atggcagact cgacatcacg ttgggcagaa gctctgcgcg 1020
agatgtcagg acgcctacaa gaaatgcctg gtgatgaagg ctacccggct tacttaggga 1080
gtcgtatttg cgaatattat gaacgggctg gtcgtgttcg gaccttggga agtcaagaac 1140
gtgagggaac cattacagcc atcggcgcgg tttctcctcc tggaggggat atttcagagc 1200
ctgtcactca aaacaccctt cggattgtca aagttttctg ggggctcgac gcgcctcttg 1260
cgcaacggcg tcaacttcca gcgattaact ggctgacgtc ttattcattg tatcaagatg 1320
atgtaggaag ctatattgac cgtaaacagc aatctaattg gtccaacaag gtaactcgtg 1380
ccatggctat tttgcagcgt gaagccagtc tagaagaaat tgtacgcttg gtggggcctg 1440
attcactgtc tgaacaagat cgtttgacca ttgctgttgc ccggcaaatt cgggaggatt 1500
atctccagca aaatcgcttt gattcggtgg atacctttac ttcttttccg aaacaagagg 1560
ccatgctaac caatattttg acctttaatg aggaagccag caaagccctt tctttgggag 1620
cttattttta tgagattatg gaaggcactg ctcaggtacg cgatcgcatc gcacgcagca 1680
aatttatccc agaagaaaac ttagagcaga ttaaagggtt tactcagaag gttaccaaa 1740
agattcacca cgttttagca aaggaggaa ttagatgag cgttct 1786

```

<210> 834

<211> 499

<212> DNA

<213> Babesia bovis strain Suarez-3

<400> 834

```

tatctcacgt aagtttttgc gcggcgggta tatatcactc caggccctgg ctaagtacgc 60
taatactgac gttactgtct atgtgggatg tggagagcgt ggaaacgaga ttgcgagggt 120
gcttaaggag ttccctgagc tgaagaccaa ggttgatggc aaggaagtga gcattatgaa 180
acgcacttgc ttgggtggcca atacttcaaa catgccagtg gccgccaggg aggctagtat 240
ctacactggc attaccctat gtgaataact caggggatatg ggatacaacg cctgtgtgat 300
ggcggattcc accagtcgtt gggctgaggg tttgcgtgag atatcaggtc gtttagctga 360
gatgcctgtg gattcagggt atcccgccta ccttgcttct aggccttcgg cgttctatga 420
gcgtgctggt acagctgagt gtattggaac accacttcgt gaaggttcag ttaccattgt 480
tggtgctgta tctccacca 499

```

<210> 835

<211> 464

<212> DNA

<213> Cryptosporidium parvum

<400> 835

```

tttctcaagc tttgagtaaa tatagtaact ctgatgttat tatttacatt gggtgtggag 60
aaagaggaaa tgaaatggca gaagttctta cagaattccc tgagctttat actatgggtg 120
atggaaagaa ggagtcaatt atgcaaagaa cttgttttagt agctaataca tcaaatatgc 180
ctgtcgctgc tagagaagct tccatctaca ctggtattac actttctgaa tacttttagag 240
atatgggatg taatgtttct atgatggcag attcaacttc tcgttgggct gaagctctta 300
gagaaatttc tggtagatta gctgaaatgc ctgcagattc gggttaccca gcatatttag 360
gcgccagact tgcttcattc tatgaaagat caggaagagt taaatgtatg gggtcccccag 420
atagagaagg tacagtaaca attgttggtg cagtttctcc acct 464

```

<210> 836

<211> 446

<212> DNA

<213> Leishmania infantum strain MOU

<400> 836

```

gccctctcca agtactccaa ctccgattgc gtcactctatg tcggctgcgg cgagcgcggg 60
aatgagatgg ccgagggtgc catggagtgc ccgacctga cgaccgtgat cgatggccgc 120
gaggagtcca tcatgaagcg cacctgcctc gtggcgaaaca cctcgaacat gccagtcgca 180
gcccgtaggg cctctattta caccggcatc accctggccg agtactaccg tgatatgggc 240
aagcatatcg ccatgatggc tgactcgacg tctcgctggg ccgaggcgct tcgtgagatt 300
tcgggtcgte tggcggagat gccggcggat ggtggctacc ccgcctacct cagcgtcgtg 360
ctcgctcct tctacgagcg cgccggcctc gtcacctgca tcggcgggcc gaagcgccag 420
ggctccgtea cgatcgctcg tgccgt 446

```

<210> 837
 <211> 456
 <212> DNA
 <213> Leishmania major ATCC 50122

<400> 837
 ttagtcaggc cctctccaag tactccaact cgcactgcgt catctatgtc ggctgcggcg 60
 agcgcggtta tgagatggct gaggtgctca tggatttccc aactctgacg accgtgatcg 120
 atggctcgca ggagtcacatc atgaagcgca cctgcctcgt ggcaaacact tcgaacatgc 180
 cagtcgcagc ccgcgaggcc tctatttaca ccggcatcac cctggccgag tactaccgtg 240
 atatgggcaa gcatattgcc atgatggccg actcgacatc tcgctggggc gaggcgcttc 300
 gtgagatttc cggctcgtctg gcggagatgc cagccgatgg tggctaccct gcctacctca 360
 gcgctcgtct cgcctccttc tacgagcgcg ccggcctcgt cacctgcacg ggcgggcccga 420
 agcgccaggg ctccgtcacg atcgctcggtg ctgtgt 456

<210> 838
 <211> 450
 <212> DNA
 <213> Leishmania tarentolae strain MOU-2

<400> 838
 aggcctcttc caagtactcc aactccgact gcgtcatcta cgtcggctgc ggcgagcgcg 60
 gtaatgagat ggccgagggtg ctcatggagt tcccgaccct gacgactgtg attgatggcc 120
 gtgaggagtc gatcatgaag cggacctgcc tcgtggccaa cacctccaac atgccagtcg 180
 cagcccgtga agcctctatt tacactggta tcacctggc cgaatactac cgtgatattg 240
 gcaagcatat cgccatgatg gctgactcga cgtctcgctg ggcggaggcg cttcgtgaga 300
 tttcgggtcg cctggcggag atgccggctg atgggtgggt ccccgccctac cttagtgtc 360
 gtcttgccct cttctacgag cgtgcggggc tcgtcacctg catcggtggg ccgaagcgcc 420
 agggctccgt cagcatcgtc ggtgccgtgt 450

<210> 839
 <211> 437
 <212> DNA
 <213> Trypanosoma brucei subsp. brucei strain EATRO795

<400> 839
 gcactctcga agtactcgaa cagtgaacgt gttattttacg tgggttgtgg tgagcgtggc 60
 aatgagatgg cggaggtgct catggacttt cccaccctca ccaccattat tgatggacgt 120
 gaggagtcta tcatgaagcg cacatgcctg gtggcaaata cttccaatat gcctgttgct 180
 gctcgtgagg catctattta cactggtatc acctagctg agtattatcg ggatatggga 240
 aaacacatcg ccatgatggc cgattcaacc tcccgctggg ctgaggcttt gcgtgagatt 300
 tccggtcgtc ttgctgaaat gcctgcagat ggaggttatc ccgcgtacct cagcgcccg 360
 ttggcctcct tctacgagcg tgctggccgt gtgacatgca tcggtggggc gaagcgtgaa 420
 gggctctgtaa caattgt 437

<210> 840
 <211> 1052
 <212> DNA
 <213> Trypanosoma cruzi strain MM3

<400> 840
 tgaaggctga gcgcgagcgc ggcacacaga tcgacatcgc gctctggaag ttcgagtcgc 60
 ccaagtctgt gttcacgac atcgacgccc ccggccaccg cgacttcacg aagaacatga 120
 tcacgggcac gtctcaggcg gacgccgccc tccttgatcat tgcgtcatcg cagggtgagt 180
 ttgaggcggg catctcgaag gacggccaga cagcgagca cgcgctgctc gccttcacgc 240
 tcggcgtgaa gcagatgggt gtgtgctgca acaagatgga cgacaagtcg gtgaacttcg 300
 ccaggagcgc ctacgatgag attgtgaagg aggtgtcggc gtacctgaag aagggtgggt 360
 acaacgtgga gaaggtgcgc ttcaccccca tctccggctg gcagggcgac aacatgattg 420
 acaagtcgga aaatatgccg tgggtacaagg gccccacgct gctggaggca ctcgacatgc 480
 tggagccccc ggtgcgcccc agcgacaagc cgtcgccct gccgctgcag gacgtgtaca 540
 agatcggcgg tatcggcacc gtgcccgtcg ctgcgctgga gacgggcacg atgaagcccc 600
 gcgacgtggg gacgtttgcg cccgccaacg tgacgacgga ggtgaagtcg attgagatgc 660

```

accacgagca gctggccgag gccacgccc gcgacaacgt cggcttcaac gtgaagaacg 720
tgtccgtgaa ggacatccgc cgtggcaacg tgtgcccga ctcgaagaac gacccccaa 780
aggaggcggc cgacttcacg gcgcaggtga tcctcctgaa ccaccccggc cagatcggca 840
acggctatgc gccggtgctc gactgccaca cctgccacat cgcgtgcaag ttcgccgaga 900
tcgagtccaa gatcgaccgc cgctccggca aggagcttga gaagaacccc aagtcgatca 960
agtccggtga cgccgccatg gtgcgcatgg tgccgcagaa gcccattgtc gtggaggtgt 1020
tcaacgacta cgctcctctt ggccgctttg cc 1052

```

<210> 841
 <211> 1061
 <212> DNA
 <213> Trypanosoma cruzi strain CGL-1

```

<400> 841
tgaaggctga gcgcgagcgc ggcattcacga tcgacatcgc gctctggaag ttcgagtcgc 60
ccaagtctgt gttcacgac atcgacgccc ccggccaccg cgacttcatc aagaacatga 120
tcacgggcac gtctcaggcg gatgccgcgc tccttgtcat tgcgtcatcg cagggtgagt 180
ttgaggcggg catctcgaag gacggccaga cgcgcgagca cgcgctgctc gccttcacgc 240
tcggcgtgaa gcagatggtt gtgtgctgca acaagatgga cgacaagtgc gtgaactttg 300
cccaggagcg ctacgatgag attgtgaagg aggtgtcggc gtacctgaag aaggttgggt 360
acaacgtgga gaaggtgcgc ttcaccccca tctccggctg gcaggcgac aacatgattg 420
acaagtcgga aaatatgccg tggatcaagg gccccacgct gctggaggca ctcgacatgc 480
tgagagcccc ggtgcgcccc agcgacaagc cgctgcgcct gccgctgcag gatgtgtaca 540
agatcggcgg tatcggcacc gtgccggctg gtccgctgga gacgggcacg atgaagcccc 600
gcgacgtggt gacgttttgc cccgccaaac tgacgacgga ggtgaagtgc attgagatgc 660
accacgagca gctggccgag gccacgcccg gcgacaacgt cggcttcaac gtgaagaacg 720
tgtccgtgaa ggacatccgc cgtggcaacg tgtgcccga ctcgaagaac gatcccccac 780
aggaggcggc cgacttcacg gcgcaggtga tcctcctgaa ccaccccggc cagatcggca 840
acggctatgc gccggtgctt gactgccaca cctgccacat cgcgtgcaag ttcgccgaga 900
tcgagtccaa gatcgaccgc cgctccggca aggagcttga gaagaacccc aagtcgatca 960
agtccggtga cgccgccatg gtgcgcatgg tgccgcagaa gcccattgtc gtggaggtgt 1020
tcaacgacta cgctcctctt ggccgctttg ccgtgcgtga c 1061

```

<210> 842
 <211> 1062
 <212> DNA
 <213> Trypanosoma cruzi strain PCU-1

```

<400> 842
gctgaaggct gagcgcgagc gcggcatcac gatcgacatc gcgctctgga agttcgagtc 60
gcccaggtct gtgttcacga tcacgacgc ccccgccacc cgcgacttca tcaagaacat 120
gatcacgggc acgtctcagg cggacgcccg cgtccttgtc attgctcatc cgcagggtga 180
gtttgaggcg ggcattctga aggacggcca gacacgcgag cacgcgctgc tcgccttcac 240
gctcggcgtg aagcagatgg ttgtgtgctg caacaagatg gacgacaagt cgggtgaactt 300
cgcccaggag cgctacgatg agattgtgaa ggaggtgtcg gcgtacctga agaaggttgg 360
gtacaacgtg gagaagggtg gcttcacccc catctccggc tggcaggggc acaacatgat 420
tgacaagtgc gaaaatatgc cgtggtacaa gggccccacg ctgctggagg cactcgacat 480
gctggagccc ccggtgcgcc ccagcgacaa gccgctgcgc ctgcccgtgc aggacgtgta 540
caagatcggc ggtatcggca ccgtgccggt cggctcgcgtg gagacgggca cgatgaagcc 600
cggcgacgtg gtgacgtttg cgcccgcaca cgtgacgacg gaggtgaagt cgattgagat 660
gcaccacgag cagctggccg aggccacgcc cggcgacaac gtcggcttca acgtgaagaa 720
cgtgtccgtg aaggacatcc gccgtggcaa cgtgtgcggc aactcgaaga acgaccccc 780
aaaggaggcg gccgacttca cggcgaggt gatcatcctg aaccacccc ggcagatcgg 840
caacggctat gcgcgggtgc tcgactgcc caactgccac atcgcgtgca agttcgccga 900
gatcgagtcc aagatcgacc gccgctccgg caaggagctt gagaagaacc ccaagtcgat 960
caagtccggt gacgccgcca tgggtgcgcat ggtgccgcag aagcccatgt gcgtggaggt 1020
gttcaacgac tacgtcctc ttggccgctt tgccgtgcgt ga 1062

```

<210> 843
 <211> 1057
 <212> DNA
 <213> Babesia bovis strain Suarez-3


```

<400> 843
tacattgaca gctgcattga ccaaggtctg ttcgatgggt ggtcatggcg agtacactcc 60
ttatgaagca attgaccgtg ctcttgagga gcgtaaacgt ggtattacta taaattcgac 120
acatgttgaa tatgagacta agaaccgtca ttacgggtcac gtggactgtc cagggtcactc 180
tgattatgtg aagaacatga tatctggcgc tgctcagatg gatggtgcca tattgggttgt 240
ttcttgtgtt gacgggtccca tgcctcagac taaggagcac gtgttgcttg ctaagcagat 300
tggtgtacct cgttttagttg tgtttttgaa caagcttgac atgttagagg actctgagct 360
attggagttg gtggagttag aggttcgtga gttattgagt gagtttggtt acgacgggtga 420
caacacgcct atcgttcgtg gcagtgctat aaaggcattg aacagtagtt ccgagggtga 480
cattaagcca attcaggatt tattggatgc gtgtgatgcc tttttactga ctccagaacg 540
taaggatgac atgccgctct tggttgctat tgacgatgtt cttgccattc ctggcaaggg 600
tactgttgta accggtagga tagagcaggg tgtgtgtgtt ggtcttrara tgttccgcaa 720
ttgcgccggt ccgaagtccg gcaagaagac tgtgtgtgtt ggtcttrara tgttccgcaa 720
gagtcctcagt raggggtattg ctggtgacca gattggtgtt ttgctcaagg gtgtgaagcg 780
cgacraggta gagcgcggtt ttgtattgat tcaaccggga agttacaaat gtcacgggtga 840
atttgatgct gacttgtacg tgttgactac graggaaggt gggcgcaagc atccgtttgt 900
gtctaactac cgtcctcagg cgtttatcac tactggagac gtttgctgct cagttcattt 960
ggatragggg gttgagatgg cagctcctgg tgacaacgtg cgttgcaaga tcaagttact 1020
ttatcccatg cctgtccatg aaggtttacg atttgcg 1057

```

```

<210> 844
<211> 943
<212> DNA
<213> Leishmania aethiopica ATCC 50119

```

```

<400> 844
cgggtggcatc attgtggtgg cggccaccga cggcgctcatg ccgcagacac ggcagcacct 60
cctgatctgc tcgcagattg ggcttccggc gctcgtaggg ttcacaaaca aagtggatat 120
gacggacgag gacacgtgcg acctggtgga catggagggtg cgcgagcagc tggagaaata 180
caagtttccg gcggaggaga caccaatcgt cgcgggctcg gccctcaagg ccgtcgaggg 240
cgacgcgaag tacgaggaga acatcctcga actggtgcgg aagtgcgacg agtggatccc 300
cgacccgccc cgcaacacag acaagccttt ccttatggcc atcgagcacg tttacgagat 360
cggcaaggac aagaagagcg tcatcgtgac cggcccgctc gatcagggcg tgctgaagct 420
caacacagac gccgagctgg ccggcttcag cgccaagaag tcgacggtga ggtgacggg 480
catcgagatg taccacaaga cgctgagcga gtgcatgccc ggtgactccg tcggcgctcag 540
cattgtcggc accggcgaca caaccagtct gtccaaggac aacgtggaac gcggcatggt 600
aatggcggcg acgggtagca cgaacctgta caacaagggtg aaggcgcagg tgtacgtgct 660
gacgaaggat gagggcgggc gccacaccgg cttcagcccc cactaccgcc cgcagctctt 720
cttccattgc gctgacgtga cagcggacat gagcttcccc gagggcgaga agcaccggga 780
ggagctgaac aagaaattcg gccgcggccc cgaggaggac aagaagaaag aggcggagat 840
gaaggagttc gagagcaagc tcgtctgcat gccgggcatg aaccgcgagc tgatcctgac 900
gctcgcgtac ccgatgccc ttgaaaaggg cctgaagttc acc 943

```

```

<210> 845
<211> 939
<212> DNA
<213> Leishmania amazonensis ATCC 50131

```

```

<400> 845
cgggtggcatc attgtggtgg cggccaccga cggcgctcatg ccgcagacac ggcagcatct 60
cttgatctgc tcgcagattg ggcttccggc gctcgtaggg ttcacaaaca aagtggacat 120
gacggacgag gacacgtgcg acctggtgga catggagggtg cgtgagcagc tggagaaata 180
caagtttccg gcggaaagaga cgccatcgt cgcgggctcg gccctcaaag ccgtcgaggg 240
cgacgcgaag tacgaggaga acatcctcga actggtgcgg aagtgcgacg aatggatccc 300
cgacccgccc cgcaacacag acaagccttt ccttatggcc attgagcacg tgctgaagct 420
cggcaaggac aagaagagcg tcatcgtgac cggcccgctc gatcagggcg ggtgacggg 480
caacacagac gccgagctgg ccggcttcag cgccaagaag tcgacggtga ggtgactccg tcggcgctcag 540
catcgagatg taccacaaga cgctgagtga gtgcatgccc ggtgactccg aacgttgaac gcggcatggt 600
cattgtcggc accggcgaca cgatcagtct ctccaaggac aaggcgcagg tgtacgtgct 660
aatggcggca acgggtagca cgaacctgta caacaagggtg aaggcgcagg cgcagctctt 720
gacgaaggat gagggcgggc gccacactgg cttcagcccc cactaccgcc cgcagctctt 780
cttccattgt gctgacgtga cggcgggcac gagcttcccc gagggcgaga agcaccgcga 840
ggagctcaac aagaaattcg gccgcggccc cgaggaggac aagcagaagg aggcggagat 900
gaaagagttc gagagcaagc tcgtctgcat gccgggagac aaccgcgagc tgatcctgac 900

```

gctggcgtag cccgatgccca ttgacaaggg tctgaagtt

<210> 846
<211> 945
<212> DNA
<213> Leishmania donovani ATCC 50212

<400> 846
cattgtggtg ggggccaccg acggcggtcat gccgcagaca cgcgagcacc tcctgatctg 60
ctcgcagatc gggcttcccg cgctcgtagg gttcatcaac aaggtggaca tgacggacga 120
ggacacgtgc gacctgggtg acatggagct gcgcgagcag ctggagaaat acaagtttcc 180
ggcggaggag acgccaatcg tgcgcggctc agccctcaaa gccgtcgagg gcgatgcgaa 240
gtacgaggag aacatttctc aactgggtgc gaagtgtgac gagtggatcc ctgacccgcc 300
gcgcaacaca gacaagcctt tccttatggc catcgagcac gtttacgaga tcggcaagga 360
caagaagagc gttgtcgtga ccggccgcgt cgatcagggc attctgaagc tcaacacaga 420
cgccgagctg gccggcttca gctccaagaa gtcgacggtg aggggtgacgg gcatcgagat 480
gtaccacaag acgctgagcg agtgcatgcc tgggtgactcc gtcggcgctca gcattgtcgg 540
gacgggtagc acgaccagtc tatccaaggg caacgtggaa ccgggcatgg tgatggcgcc 600
tgagggcgcc cgccacactg gcttttagtcc tcaactaccg ccgcagctct tcttccattg 720
tgctgacgtg acggcgggaca tgagcttccc ggaggcgagg aagcaccgag aagagctcaa 780
caagaaattc ggccgcggcc ccgaggagga caagaagaaa gaggcagcga tgaaggagtt 840
cgagagcaag ctctgtctga tgccgggcga taaccgcgag ctgatcctga cgctggcgta 900
cccgatgccc attgaaaagg gtctgaagtt caccatccgt gagggg 945

<210> 847
<211> 939
<212> DNA
<213> Leishmania infantum strain MOU

<400> 847
ggcatcattg tgggtggcgcc caccgacggc gtcattgccgc agacacgcga gcacctcctg 60
atctgctcgc agatcgggct tccggcgctc gtaggggttca tcaacaagggt ggacatgacg 120
gacgaggaca cgtgcgacct ggtggacatg gagctgcgcg agcagctgga gaaatacaag 180
tttccggcgg aggagacgcc aatcgtgcgc ggctcagccc tcaaagccgt cgagggcgat 240
gcgaagtacg aggagaacat tctcgaactg gtgcggaagt gtgacgagtg gatccctgac 300
ccgccgcgca acacagacaa gccttttcctt atggccatcg agcacgttta cgagatcggc 360
aaggacaaga agagcgttgt cgtgaccggc cgctcgatc agggcgcttct gaagctcaac 420
acagacgccg agctggcccg cttcagctcc aagaagtcga cgggtgaggg gacgggcatc 480
gagatgtacc acaagacgct gagcagtgct atgcctgggt actccgtcgg cgtcagcatt 540
gtcggcaccg gcgacacgac cagtctatcc aagggcaacg tggaaacgcgg catggtgatg 600
gcgggcagcg gtagcacgaa cctgtacaac aaggtgaagg accgcccga gctcttcttc 720
aaggatgagg gcgcccgcca cactggcttt agtctcact cggagaagca ccgcgaagag 780
cattgtgctg acgtgacggc ggacatgagc tccccggagg cggagaaagg agcgatgaag 840
ctcaacaaga aattcgcccg cggccccgag gaggacaaga agaaagaggc cctgacgctg 900
gagttcgaga gcaagctcgt ctgcatgccg ggcgataacc gcgagctgat cctgacgctg 939
gcgtacccca tgccattga aaagggtctg aagttcacc

<210> 848
<211> 933
<212> DNA
<213> Leishmania enriettii ATCC 50120

<400> 848
caccgacggc gtcattgccgc agacacggga gcacctgctc atctgctcgc agatcgggct 60
gccggcgctt gtaggggttca tcaataaagt tgacatgacg gacgaggata cgtgcgacct 120
cgtggacatg gaggtgcggg aacagctgga gaagtacaag tttccggccg aggagacgcc 180
catcgtacgt ggctcggccc tcaaggccct cgagggggat gcgcaatacg aggggagtat 240
tctcagactg gtgcgaaagt gcgacgagtg gatccccgac ccgccgcgca acaccgaaa 300
gcctttcttc atggctatcg agcacgttta cgagctcggc aaagacaaga agagcgtcat 360
cgttaccggc cgcgtcgatc aaggtgtgct gaagctcaac acagacgccg agctggccgg 420
cttcagcgcc aagaaggcga cagtcaaagt gacgggcatc gagatgtatc acaagacact 480
caatgagtgc atgcccggcg actctgtcgg tgctcagcatc gtcgggtaccg gtgacacgac 540

```

cagcttatcc aaggataatg ttgagcgcggt tatggtaatg gcggaacgg gtagcacgaa 600
cctgtacaac aagctgaagg cgcaggttta cgtgctgaca aaggaggagg gtggccgcca 660
caccgggttc agccccact accgcccga gctcttcttc cactgcgctg acgtgaccgc 720
agacatgagc ttcccggagg cggagaagta ccgcgaggag ctcaacaaga agttcgcccg 780
tgcccttgag gaggacaaga agaaagaggc ggagatgaag gagttcgaaa gcaaacttgt 840
ctgcatgcca ggcgataacc gcgagctgat cctaactctg gcgtaccgca tgcccatcga 900
caagggcctg aagttcacca tccgtgaggg cgg 933

```

<210> 849
 <211> 943
 <212> DNA
 <213> *Leishmania gerbilli* ATCC 50121

```

<400> 849
cgggtggcatc attgtggtgg cggccaccga cggcgctcatg ccgcagacac gcgagcacct 60
cctgatctgc tcgcagattg ggcttccggc gctcgtaggg ttcatacaaa aagtggacat 120
gacggacgag gacacgtgag acctgggtgga catggagggtg ccgcagcagc tggagaaata 180
caagtttccg gcggaggaga caccaatcgt gcgcggctcg gccctcaagg ccgtcgaggg 240
cgacgcgaag tacgaggaga acatcctcga actggtgcgg aagtgcgacg agtggatccc 300
cgacccgccc cgcaacacag acaagccttt ccttatggcc atcgagcacg tttacgagat 360
cgggaaggac aagaagagcg tcacgtgac cggccgcgctc gatcagggcg tgctgaagct 420
caacacggac gccgagctgg cgggcttcag cgccaagaag tcgacgggtga ggggtgacggg 480
cattgagatg taccacaaga cgctgagcga gtgcatgccc ggtgactccg tcggcgctcag 540
cattgtcggc accggcgaca cgaccagtct gtccaaggac aacgtggaac gcggcatggg 600
aatggcgggc acgggtagca cgaacctgta caacaagggt aaggcgagg tgtacgtgct 660
gacgaaggat gagggcgccc gccacactgg cttcagcccc cactaccgcc cgcagctctt 720
cttccattgc gctgacgtga cagcggacat gagcttcccc gaggcggaga agcaccgcga 780
ggagctcaac aagaaattcg gccgcggccc cgaggaggac aagaagaaag aggcggagat 840
gaaggagttc gagagcaagc tcgtctgcat gccgggcgat aaccgcgagc tgatcctgac 900
gctggcgctac ccgatgcccc ttgaaaaggg tctgaagttc acc 943

```

<210> 850
 <211> 918
 <212> DNA
 <213> *Leishmania major* ATCC 50122

```

<400> 850
ggcatcattg tgggtggcgcc caccgacggc gtcattgccgc agacacgcga acacctctctg 60
atctgctcgc aaattggcct tccggcgctc gttaggtttca tcaacaaagt ggacatgacg 120
gacgaggaca cgtgtgacct ggtggacatg gaggtgcgag agcagctgga gaaatacaag 180
tttccggcgg aggagacacc aatcgtgcgc ggctcggccc tcaaggccgt cgaggcgac 240
gcgaagtacg aggagaacat cctcgaactg gtgcggaagt ggcacgagtg gatccccgac 300
ccgccgcgca acacagacaa gcctttcctt atggccatcg agcacgttta cgagatcgcc 360
aaggacaaga agagcgtcat cgtgaccggc cgcgtcgatc agggcgtgct gaagctcaac 420
acagacgccg agctggccgg cttcagcgcc aagaagtcca cgggtgaggg gacgggcatt 480
gaaatgtacc acaagacgct gagcagagtg atgcccggtg actccgctcg cgtcagcatt 540
gtcggcaccg gcgacacgac cagtctgtcc aaggacaacg tggagcgagg catggtaatg 600
gcggcgacgg gtagcacgaa cctgtacaac aaggtgaagg ccgaggtgta cgtgctgacg 660
aaggatgagg gcggccgcca cactggcttc agccccact accgcccga gctcttcttc 720
cattgcgctg acgtgacagc ggacatgagc ttcccggagg cggagaagca ccgcgaggag 780
ctcaacaaga aattcgcccg cggccccgag gaggacaaga agaaagaggc ggagatgaag 840
gagttcgaga gcaagctcgt ctgcatgccg ggcgataacc gcgagctgat cctgacgctg 900
gcgtaccgca tgcccatt 918

```

<210> 851
 <211> 939
 <212> DNA
 <213> *Leishmania mexicana* ATCC 50156

```

<400> 851
cgggtggcatc attgtggtgg cggccaccga cggcgctcatg ccgcagacac gcgagcatct 60
cctgatctgc tcgcagattg ggcttccggc gctcgtaggg ttcatacaaa aagtggacat 120
gacggacgag gacacgtgag acctgggtgga catggagggtg cgtgagcagc tggagaaata 180

```

```

caagtttccg gcggaagaga cgcccatcgt ggcgggctcg gccctcaagg ccgtcgaggg 240
cgacgcgaag tacgaggaga acatcctcga actgggtcgg aagtgcgacg aatggatccc 300
cgacccgccg cgcaacacag acaagccttt ccttatggcc attgagcacg tttacgagat 360
cggcaaggac aagaagagcg tcatcgtgac cggccgcgtc gatcagggcg tgctgaagct 420
caacacagac gccgagctgg ccggcttcag cgtcaagaag tcgacgggtga gggtagcggg 480
catcgagatg taccacaaga cgctgagtga gtgcatgccc ggtgactccg tcggcgtcag 540
cattgtcggc accggcgaca cgatcagtct ctccaaggac aacgttgaac gcggcatggt 600
aatggcgcca acgggtagca cgaacctgta caacaagggt aaggcgagcag tgtacgtgct 660
gacgaaggat gaggggcgcc gccacactgg cttcagcccc cactaccgcc cgcagctctt 720
cttcattgtg gctgacgtga cggcggacat gagcttcccc gagggcgaga agcaccgcga 780
ggagctcaac aagaaattcg gccgcggccc cgaggaggac aagcagaagg aggcggagat 840
gaaagagttc gagagcaagc tcgtctgcat gccggcgac aaccgcgagc tgatcctgac 900
gctggcgtag ccgatgcccc ttgagaaggg tctgaagtt 939

```

<210> 852
 <211> 912
 <212> DNA
 <213> *Leishmania tarentolae* strain MOU-2

```

<400> 852
tcattgtggt ggccgccacc gacggcgctca tgccgcaaac acgggagcac cttttgatct 60
gctcgcagat cgggctgccg gcgctcgtag ggttcatcaa caaagtggac atgacagacg 120
aagacacgtg cgacctggta gacctggagg tgctgtagca gctggagaag tacaagtttc 180
cggcagagga aacaccaatc gtgcgtgggt cgccctcaa ggccgttgag ggcgatgcaa 240
agtacgagga gaacatcctc gaactgggtg ggaagtgcga cgagtggatc ccagaccgcg 300
cacgcaatac ggacaagcct ttccttatgg ccattgaaca cgtgtacgag atcggcaagg 360
ataggaaaag cgtcatcgta accggcccgcg tcgatcaagg tgtgctgaag ctgaacacag 420
acgccgagct ggccggcttc agcgccaaga agtcgacggt gaaagtgcag ggcattgaga 480
tgtaccacaa gacactgaca gactgcatgc ccggcgactc tgccggcgtc agcattgtgg 540
gcactggyga caccgaccag ctctctaagg acaatgttga gcgtggcatg gtactggccg 600
ctacgggtag caccgaacct tacaacaaag taaaggcgca ggtgtatgta ctcacgaagg 660
atgagggcgg ccgccacacc ggcttcagcc cccactaccg tccgcagctc ttcttccact 720
gcgctgacgt aacggcgggc atgagcttcc cggaggcgga gaagcaccgc gaggaactca 780
ataagaaatt cggccgcggc cccgaggagg acaagaaaaa ggaggcgagg atgaaggagt 840
tcgagagcaa gctgggtctg atgccaggcg ataaccgcga gctgatcctg acattggcgt 900
acccgatgcc ta 912

```

<210> 853
 <211> 936
 <212> DNA
 <213> *Trypanosoma cruzi* strain MM3

```

<400> 853
attcttgtgg tggcagctaa cgacggatgc atgccgcaga cgcgtgagca cctgcttatt 60
tgttcgcaga ttggccttcc tgctcttgta tgctttatca ataagtgtga catgatgcaa 120
gggcaggagg aatgatttga acttggttga atggaggtac gtgaactttt ggagaagtac 180
aagttccctg cggaggagac gccatttgtg cgggggtctg cgggtgaaggc attggagggt 240
gatgctgaaa atgaaggaaa gattttggag cttgtaaaaa aatgtgatga atggattccc 300
gacccaccgc gtgccattga aaaaccgttc cttatggcca ttgagcacgt ttttgagggt 360
ggaaaggata agaaggcgtg tgttgtgagc gggcgtgtgg accaggggca gttgaaggtc 420
ggcgcagatg cagaactttc cgggttttag ccaaagaagc tgacgggtga ggttgctagc 480
atcgaaatgt accataaaat tctggaggat tgcatgcctg gtgactctgt tggcgcgaag 540
atcgttggca gcggtgaaac agtgaacctg tcgaaggaaa atgtggaaac cggcattggt 600
ctctccgcac caggtgcaac gacactgttc aacaagggtc gcgcgcaggt gtacgtgttg 660
acaaaggaag aaggcggtcg tcacacagcc tttagtctc actatcgtcc gcagcttttc 720
ttccactgtg ctgatgtcac ggcagatatt aacttcccgg aaagcgagaa gcttgacagg 780
gagctgaaca aaaagtatgg ccgtgatgcg gcggaacaga agaagaagga ggcagaactg 840
aaagagtttg aaaagacgct tgtctgcatg cctgggtgata accgcgaact cctgctcacc 900
cttgccctatc caatgccaat ggaaaaggga ctcaag 936

```

<210> 854
 <211> 934
 <212> DNA

<213> Trypanosoma cruzi strain PCU-1

```

<400> 854
cggcattctt gtggtggcag ctaacgacgg atgcatgccg cagacgcgtg agcacctgct 60
tatttggttcg cagattggcc ttctgtctct tgtatgcttt atcaataagt gtgacatgat 120
gcaagggcag gaggaatga ttgagcttgt tgaaatggag gtacgtgaac ttttggagaa 180
gtacaagttc cctgcggagg agacgccatt tgtgcggggg tctgcggtga aggcattgga 240
gggtgatgct gaaaatgaag gaaagatttt ggagcttgta aaaaaatgtg atgaatggat 300
tcccgaacca ccgcgtgccca ttgaaaaacc gttccttatg gccattgagc acgtttttga 360
gggttgaaag gataagaagg ccgttggtgt gagcgggctg gtggaccagg ggcagttgaa 420
ggtcggcgca gatgcagaac ttcccggtt tagtgcaaag aagctgacgg tgaaggttgc 480
tagcatcgaa atgtaccata aaattctgga ggattgcatg cctggtgact ctattggcgc 540
gaagatcggt ggcagcggtg aaacagtga cctgtcgaag gaaaatgtgg aacgcggcat 600
ggtactctcc gcaccagtg caacgacact gttcaacagg gtccgcgcgc aggtgtacgt 660
gttgacaaag gaagaaggcg gtcgtcacac agcctttagt cctcactatc gtccgcagct 720
tttctccac tgtgctgatg tcacggcgga tattaacttc ccggaagcgc agaagcttgc 780
aggggagctg aacaaaaagt atggccgtga cgcgcggaag cagaagaaga aggaggcaga 840
actgaaagag tttgaaaaga cgcttgctg catgcctggt gataaccgcg aactcctgct 900
cacccttgcc tatccaatgc caatggaaaa ggga 934

```

<210> 855

<211> 937

<212> DNA

<213> Trypanosoma cruzi strain CGL-1

```

<400> 855
tggcggcatt cttgtggtgg cagctaacga cggatgcatg ccgcagacgc gtgagcacct 60
gcttatttgt tcgcagattg gccttcctgc tcttgatgct tttatcaata agtgtgacat 120
gatgcaaggg caggaggaaa tgattgaact tgttgaaatg gaggtacgtg aacttttgga 180
gaagtacaag ttccctgcgg aggagacgcc atttgtcggy gggctctgcgg tgaaggcatt 240
ggagggtgat gctgaaaatg aaggaaagat tttggagctt gtaaaaaaat gtgatgaatg 300
gattcccgac ccaccgcgtg ccattgaaaa accgttcctt atggccattg agcacgtttt 360
tgaggttgga aaggataaga aggccgttgt tgtgagcggg cgtgtggacc aggggcagtt 420
gaaggctcgg gcagatgcag aactttccgg gtttagcgca aagaagctga cgggtgaagg 480
tgctagcatc gaaatgtacc ataaaattct ggaggattgc atgcctggtg actctgttgg 540
cgcaagatc gttggcagcg gtgaaacagt gaacctgtcg aaggaaaatg tggaaacgcg 600
catggctact tccgcaccag gtgcaacgac actgttcaac aagggtccgcg cgcaggtgta 660
cgtgttgaca aaggaaagaag gcggtcgtca cacagcctt agtcctcact atcgtccgca 720
gcttttcttc cactgtgctg atgtcacgga agatattaac ttcccggaag gcgagaagct 780
tgcaggggag ctgaacaaaa agtatggcgg tgatgcggcg gaacagaaga agaaggaggc 840
agaactgaaa gagtttgaaa agacgcttgt ctgcatgcct ggtgataacc gcgaactcct 900
gctcaccctt gcctatccaa tgccaatgga aaaggga 937

```

<210> 856

<211> 888

<212> DNA

<213> Babesia bigemina strain Suarez-2

```

<400> 856
cttattatgg agctgatcaa caacgtcgcg aagaagcacg gtggtttctc cgtgttcgcc 60
ggcgctcggcg agcgaccag ggagggcaac gagctgtacc acgagatgat ggagaccggc 120
gtcatcaagc gcccgcaact ggatgacggc acgttcgact tctccggctc caaggccgcg 180
ctggtgtacg gccagatgaa cgagccgcca ggtgccaggg cgcgtgttgc cctcactggc 240
ctgacggtgg ccgagtactt ccgtgatgag gacggccagg acgtgctgct cttcatcgac 300
aacatctacc gtttcaccca ggctggttct gaggtgagtg cccttttggg gcgcatccc 360
tccgcgctcg gttaccagcc gaccctcgcc accgacctg gtgcaggccg tctacgtgcc ggccgacgat 420
acgacgacca acaagggctc catcacctcc gtgcaggccg tctacgtgcc ggccgacgat 480
atcacggacc cggcgcttgc gaccaccttc acccatctgg acgcgaccac tgtgctctcc 540
cgttccatcg ccgagctggg tatctacccc gccgtcgacc cgctcgactc cactcgagct 600
atgctgtccg cgaacatcgt cggcgaggag cagtacaacg tggcgcggtg cgtgcagaaa 660
atactgcagg actacaaatc gctgcaggat atcatcgcca tcttggttat ggacgagctg 720
tctgagcagg acaagttcgt cgtcgcgcgt gcgcgcaagg ttcagcgttt cctatcccag 780
cccttccagg tggctgaggt attcaccggc aagcccggac gtttcgtcga gctgcaggac 840
accatcagcg gcgtcaagga gatthttggac ggagagtgcg acgacatg 888

```

<210> 857
<211> 884
<212> DNA
<213> Babesia bovis strain Suarez-3

```
<400> 857
tgattatgga attgatcaac aatgtcgcca agaaacacgg tgggttctcc gtgttcgctg 60
gtgttggtga acgtacgagg gaaggtaacg aactgtacca tgaaatgatg gaaacgggtg 120
tcatcaagcg ccgtcaactg gaagacggaa catttgactt ctcgggctct aaagctgctt 180
tgggtgtacgg acaaatgaac gaaccaccag gtgctagagc ccgtgttgca ctcacgggat 240
tgaccgttgc cgagtatttc cgtgatgaag aggggcagga tgtgctactc ttcacgata 300
acatctaccg tttcacccag gccggttccg aagtgaagtgc gctgttagga agaattccat 360
ccgccgtggg ttatcaacct acattggcca ctgatctcgg agcactccag gaacgcatta 420
ctacaaccaa caagggttcg attacatcag tccaggcagt atacgtccca gccgatgata 480
tcaactgatcc cgctccagct accactttct cgcacttggg tgccactaca gtgctttctc 540
gttcaattgc ggagttgggt atttaccctg cggctcgacc gcttgactca acgtcacgta 600
tgctgtcggc caacattgta ggacaggaac agtacgatgc cgcacgtggg gtacagaaaa 660
ttttacagga ctacaaatca ctgcaggata tcattgccat tctgggtatg gacgagctgt 720
ctgagcagga caagttcgtt gtagcacgcg cccgtaaggt acagcgtttc ctgtctcagc 780
cgttccaagt ggctgaggtg ttcaccggca agcctgggag gttcgttgaa ctacaggata 840
ccatcagcgg tgtcaaggaa atctggaagg tgagtgtgac gata 884
```

<210> 858
<211> 871
<212> DNA
<213> Babesia microtti strain Persing-1

```
<400> 858
tggaactgat taataatgtg gccaaaaagc atggcggtta ctctgttttt gcaggtgtag 60
gtgaaaggac gagggagggt aatgaattgt accatgaaat gatggagaca ggtgttataa 120
agaaaaaggc actaggtggt ggggaagttg atttcagtggt atctaaagca gcgctggtct 180
atggacaaat gaacgagcca cctggggccc gtgctagagt ggcactaact ggattaacag 240
tcgcagaata tttccgtgac gaacaaggac aagacgtggt gttgtttatt gataatattt 300
accgatttac tcaggcaggg tctgaggttt cagccttgct aggccgtata ccttcagctg 360
tgggatacca gcctacattg gcaacagatc ttggctgttt acaagaacga attactacga 420
ccaaatctgg ttcaatcacc agtgtacaag ctgtgtatgt gccagcagat gatattactg 480
atccagcgcc tgccacaact tttactcact tggacgctac tactgtactt agcaggccaa 540
ttgtgtaact cggatatttat ccagcgttag acccgttgga ttcaacaagc cgtatgctaa 600
gcgcgaacat tgtgggaaat gaacactata gtgtagcccg ttccgtgcag aagatactgc 660
aagattacaa atcgcttcag gacattattg ccattttggg tatggatgaa ctgtcggaa 720
aagacaaaaa tatagtagcc cgagcaagga agatgcaaag gttcttatca cagccattcc 780
aagtggcgga agtttttact ggtaaaccgg gaagatttgt ggaattggaa gatacaattg 840
ccggggcagc agatataatt gcgggtaatt g 871
```

<210> 859
<211> 1255
<212> DNA
<213> Leishmania guyanensis ATCC 50126

```
<400> 859
tgacggcgct ggacgtgacg gaggacctcg gccgcgatga gccgctgacg ctggagatcg 60
tgcagcactt ggatgcgaac accggccgct gcattgcgat gcagacgacg gacctgctga 120
agctgaagtc gaaggttgtg tgcaccggcg gcaacatctc cgtgccggtg ggccgcgaga 180
cactgggccc catcttcaac gtgctgggcg acgcgattga ccaccgcggc cccgtgtgcg 240
agaagatgcy catggcgatc cagcccgagg cgccgaagct ggccggaccag gctgcggagg 300
acacgatcct gacgaccggc atcaaggtga tgcacctgat tctgccctac tgcaagggcg 360
gcaagatcgg cctgttcggc ggtgccgggt tgggcaagac tgtgatcatc atggagctga 420
tcaacaacgt cgcgaagggg cacggcggct tctccgtgtt cgccggcggt ggccagcgca 480
cgcgcgaggg cacggacctg tacctggaga tgatgcagtc aaaggtgatt gacctgaagg 540
gcgagtcgaa gtgcgtgctt gtgtacgggc agatgaacga gccccgggt gcgcgcgcgc 600
gcgttgcgca gtctgcgctg acgatggccg agtacttccg cgacgtggag ggccagaacg 660
tgctgtctgt catcgacaac atcttccgct tcacgcaggc gaactccgag gtgtctgcgc 720
tgctggggcg catccccggc gccgtgggtt accagccgac gcttgccgag gatcttgga 780
```

tgctgcagga	gcgccattacg	tcgacgacga	agggatcgat	tacgtctgtg	caggctgtgt	840
acgtgcctgc	ggatgatatc	acggaccccg	cgcccgcgac	gacgttctcg	cacctggacg	900
cgacgactgt	gctggaccgc	gcgggtggcgg	agtcggggcat	ctaccctgcc	gtgaaccgcg	960
tggagtgcgc	gtcgcgcac	atggaccccg	atgtgatcga	cgtggaccat	tacaacgttg	1020
cacaggatat	cgtccagatg	ctgaccaagt	acaaggagct	gcaggacatc	attgcgggtgc	1080
ttggcatcga	cgagctgagc	gaggaggaca	aggtcgtggg	ggaccgcgcg	cgcaagggtga	1140
cgcggttcct	gtcgcagccg	ttccagggtt	cggagggtgt	caccggcatg	acggggccact	1200
acgtgcagct	gagcgacacg	gtggagtctg	tctctggcct	gctgatgggg	tcgta	1255

<210> 860

<211> 1222

<212> DNA

<213> *Leishmania mexicana* ATCC 50156

<400> 860

ctcggagggc	gtccccgccc	tgctgacggc	gctggatgtg	acggaggacc	ttggccgcga	60
tgagccgctg	acgtctggaga	tcgtgcagca	cctggacgcg	aacaccggcc	gctgcattgc	120
gatgcagacg	acggacctgc	tgaagctgaa	gtcgaagggt	gtgtcgaccg	gcggcaacat	180
ctctgtgccc	gtgggcccgtg	agacgctggg	ccgcattctc	aacgtgctgg	gcgacgcgat	240
cgaccagcgc	ggccccgtgg	gtgagaagat	gcgcattggc	atccacgcgc	aggccccgaa	300
gctggcgcat	caggccgcgg	aggacacgat	cctgacgacc	ggcatcaagg	tgatcgacct	360
gattctgccc	tactgcaagg	gtggcaagat	cggcctgttt	ggcggcgccg	gtgtgggcaa	420
gacctgtgat	atcatggagc	tgattaacaa	cgtcgcgaag	ggccacgggtg	gtttctcggt	480
gtttgcccgc	gttggcgagc	gcacgcgcga	gggacgcgac	ctgtacctgg	agatgatgca	540
gtcgaagggt	attgacctga	agggcgagtc	gaagtgcgtg	cttgtgtacg	ggcagatgaa	600
cgagcccccg	ggtgcgcgcg	cgcgcgttgc	gcagtcctgc	ctgacgatgg	cggagtactt	660
ccgagacgtg	gagggccaga	atgtgctgct	gttcatcgac	aacatcttcc	gcttcacgca	720
ggcgaactcc	gaggtctctg	cgtgctggg	ccgcattccg	gccgccgtgg	gctaccagcc	780
gacgcttgcc	gaggatcttg	gtatgctgca	ggagcgcac	acgtcgacga	cgaaggggtc	840
gatacagctc	gtgcaggccg	tgtacgtgcc	tgccgatgat	atcacggatc	cggcgccccg	900
gacgacgttc	tcgcacctgg	acgcgacgac	tgtgctggac	cgcgcgggtg	cggagtcggg	960
gatctaccct	gccgtgaacc	cgtctggagtg	cgcgtcgcgt	atcatggacc	ccgatgtgat	1020
cgacgtggac	cactacaacg	ttgctgcagga	tatcgtgcag	atgctgacca	agtacaagga	1080
gctgcaggat	atcattgcgg	tgcttgggtat	cgacgagctg	agcgaggagg	acaaggctcg	1140
ggtggaccgc	gcgcgcaagg	tgacccggtt	cctgtcgcag	ccgttccagg	ttgcggagggt	1200
gttcacgggc	atgacgggcc	ac				1222

<210> 861

<211> 1246

<212> DNA

<213> *Leishmania tropica* ATCC 50129

<400> 861

ccgtgctgac	ggcgtctggat	gtgacggagg	accttggccg	cgatgagccg	ctgacgctgg	60
agatcgtgca	gcacttggac	gcgaacaccg	gccgctgcat	tgcatgacg	acgacggacc	120
tgctgaagct	gaagtcgaag	gttgtgtcga	cggcgggcaa	catctctgtg	ccggtggggc	180
gtgagacgct	gggcccgcac	ttcaacgttc	tgggcgacgc	gatcgaccag	cgcggccccg	240
tgggcgagaa	gatgcgcacg	gcgatccacg	ccgaggcccc	gaagctggcg	gatcaggccg	300
cggaggacac	gatactgacg	accggcatca	aggtgatcga	cctgattctg	ccctactgca	360
aggggtggcaa	gatcggcctg	ttcggcgggtg	ccggtgtggg	caagactgtg	atcatcatgg	420
agctgatcaa	caacgtcgcg	aagggccacg	gtggtttctc	cgtgttttgc	ggcgttggcg	480
agcgacgcg	cgagggcacg	gacctgtacc	tggagatgat	gcagtcgaag	gtgattgacc	540
tgaagggcga	gtcgaagtgc	gtgcttgtgt	acgggcagat	gaacgagccc	ccgggtgcgc	600
gcgcgcgcgt	tgcgcagctc	gcgctgacga	tggcggagta	cttccgcgac	gtggaggggc	660
agaacgtgct	gctgttcatc	gacaacatct	tccgcttcac	gcaggcgaac	tccgaggtgt	720
ctgcgctgct	gggcccgcatt	cggccgcgcg	tgggctacca	gccgacgctt	gcggaggatc	780
ttggtatgct	gcaggagcgc	atcacgtcga	caacgaaggg	gtcgatcacg	tccgtgcagg	840
ccgtgtacgt	gccagcggat	gatatacccg	atcccgcgcc	cgcgacgacg	ttctcgcacc	900
tggacgcgac	gactgtgctg	gaccgcgcgg	tggcggagtc	gggcatctac	cctgccgtga	960
acccgctgga	gtgcgcgctg	cgtatcatgg	accccgatgt	gatcgatgtg	gaccactaca	1020
acgttgcgca	ggatatcgctg	cagatgctga	ccaagtacaa	ggagctgcag	gatatacttg	1080
cgggtgcttgg	catcgacgag	ctgagcgagg	aagacaaggt	tgttgtggac	cgcgcgcgca	1140
aggtgacccg	gttccgtgctg	cagccgttcc	aggttgcgga	ggtgttcacg	ggcatgacgg	1200
gccactacgt	gcagctggtc	gacacggtgg	agtcgttctc	tggcct		1246

<210> 862
<211> 1265
<212> DNA
<213> *Leishmania tropica* ATCC 30815

<400> 862
ggcgtgccgc cctgtgctgac ggcgctggat gtgacggagg accttggccg cgatgagccg 60
ctgacgctgg agatcgtgca gcacttggac gcgaacacgg gccgctgcat tgcgatgcag 120
acgacggacc tgctgaagct gaagtcgaag gtcgtgtcga ccggcggcaa catctctgtg 180
ccggtggggc gtgagacgct gggccgcac ttcaaygttc tgggcgacgc gatcgaccag 240
cgcgcccccg tgggcgagaa gatgcgcatg gcgatccacg ccgaggcccc gaagctggcg 300
gatcaggccg cggaggacac gacccctgacg accggcatca aggtgatcga cctgattctg 360
ccctactgca aggggtggcaa gatcggcctg ttcggcggtg ccggtgtggg caagactgtg 420
atcatcatgg agctgatcaa caacgtcgcg aagggccacg gcggtttctc cgtgtttgcc 480
ggcgttggcg agcgcacgcg cgagggcacg gacctgtacc tggagatgat gcagtcgaag 540
ctgattgacc tgaaggcgca gtcgaagtgy gtgcttgtgt atgggcagat gaacgagccc 600
ccgggtgctg gcgcgcgcgt tgcgcagtct gcgctgacga tggcggagta cttccgcgac 660
gtggagggcc agaacgtgct gctgttcac gacaacatct tccgcttcac gcaggcgaac 720
tccgaggtgt ctgcgctgct gggccgcatt ccggccgcg tgggctacca gccgacgctt 780
gcggaggatc ttggtatgct gcaggagcgc atcacgtcga caacgaaggg gtcgatcacg 840
tccgtgcagg ccgtgtacgt gccagcggat gatatacagg atcccgcgcc cgcgacgacg 900
ttctcgcacc tggacgcgac gactgtgtctg gaccgcgcgg tggcggagtc gggcatctac 960
cctgccgtga acccgctgga gtgcgcgtcg cgtatcatgg accctgatgt gatcgatgtg 1020
gaccactaca acgttgcgca ggatatcgtg catagctga ccaagtacaa ggagctgcag 1080
gatatacatt cggtgcttgg catcgacgag ctgagcgagg aagacaaggt tgttgtggac 1140
cgcgcgcgca aggtgacccg gttcctgtcg cagccgttcc aggttgcgga ggtgttcacg 1200
ggcatgacgg gccactacgt gcagctggtc gacacggtgg agtcgttctc tggcctgctg 1260
atggg 1265

<210> 863
<211> 1191
<212> DNA
<213> *Bordetella pertussis*

<400> 863
atggcaaaag gcaagtttga acgtaccaag ccgcacgtga acgtgggtac gattgggtcac 60
gttgaccacg gcaaaacgac gttgacggcg gcgatcacga cggctgctgc gaacaagtgc 120
ggcggcgagg ctccgggcta cgaccagatt gacgcggcgc cggaagagaa ggcgcgtggg 180
atcacgatca acacctcgca cgttgagtac gagacggaga cgcgtcacta cgcgcacgtt 240
gattgcccgg gtcacgctga ctacgtgaag aacatgatca cgggtgctgc gcagatggac 300
ggcgcgatcc tgggtggtgtc ggccgcgac ggcccgatgc cgcagacgcg cgagcacatt 360
ttgctgtcgc gccaggttgg cgtgccgtac atcatcgtgt gagatggaag tccgcgaact gctgagcaag 480
gttgatgacg cggagctgct cgagctgggt gagatggaag cggccaagct ggcgctggaa 540
tacgatttcc cgggcgatga caccgccgatc gtgaatggtg cggccaagct ggcgctggaa 600
agcgacaacg gcgacctggg cgagcaggcg attctgtcgc tggcgcgaagc gctggacacg 660
tacattccga cgccggagcg cgcggtcgac ggtgcgttcc tgatgccggg ggaagacgtg 720
ttctcgatct cgggccgtgg cacggtgggt actggccgta tgcagcgcg cgtggtgaag 780
gttggcgagg aaatcgaaat cgtgggcatc aagccgacgg tgaagacgac ctgcacgggc 840
gtggagatgt tccgcaagct gctggaccag ggccaggcgg gcgacaacgt gggatatctt 900
ctgcgcggca ccaagcgtga agacgtcgag cgtggccagg tgctggccaa gcccgggttcg 960
atcaaccgcg acacggactt cacggccgag gtgtacattc tgtccaagga agaggggtggc 1020
cgtcacacgc cgttcttcaa cggtatcgt ccgcagttct acttccgcac gacggacgtg 1080
accggcacga tcgacctgcc ggccggacaag gaaatggtgc tgccggggcg caacgtgtcg 1140
atgaccgtca agctgctggc cccgatcgcc atggaagaag gtctgcgttt cgccatccgt 1191
gaaggcggtc gtaccgtcgg tgccggcgtc gtcgccaaag tcatcaagta a

<210> 864
<211> 1350
<212> DNA
<213> *Trypanosoma brucei* strain LVH/75/USAMRU-K/18

<400> 864
atgggaaagg aaaaggtgca catgaatctt gtgggtgggtg gccacgtcga tgccggtaaa 60


```

tccactgcaa cgggtcactt gatctacaag tgcgggtggt ttgacaaaacg tacgatcgag 120
aagttcgaga aagaagctgc cgacattggt aaggcctcat tcaagtacgc atgggtgctg 180
gacaagctga aggtcgagcg cgaacgtggt atcacgatcg acattgcact gtggaaattc 240
gagtcaccca agtctgtctt cactattatt gatgctcctg ggcaccgtga cttcatcaag 300
aacatgatca ccggcacatc gcaagccgac gcagccatcc tcatcattgc ctctgcgcag 360
ggtgagttcg aggtcggtat ctccaaggat ggacagaccc gcgagcacgc gttgctggcc 420
ttcacttttg gtgtgaagca gatggttgtg tgctgcaaca aaatggacga caagactgtg 480
aactacggac aggagcggta tgacgagatt gtgaaggagg tgtctgctta catcaagaag 540
gttgggtaca acgtggagaa ggtgcgcttc gtcccatct cccgatggca gggcgacaac 600
atgattgaga aatccgagaa gatgccatgg tacaagggtc caacgctcct ggaggcacta 660
gacatgctgg agccaccagt gcgtccgagc gacaagcccc tgcgtctgcc actgcagacg 720
tgtacaaaga tcggtggtat tggcaccgtg cccgttggtc gtgtggagac cggcgtgatg 780
aagcctgggt atgtgggtgac gtttgcccc gccaacgtga cgaccgaggt gaaatcgatc 840
gagatgcacc acgagcagct cgctgaggcg acccccggtg acaacgtcgg cttaacgtg 900
aagaacgttt ctgtaaagga catccgccgt ggcaacgtct gcggtaacac caagaacgac 960
cccccaaagg aggcgcgcga cttcacggca caggtgatca tcctgaacca ccccgacag 1020
attggaaacg gttatgcgcc cgtgctggac tgccacacat cgcacattgc ctgcaagttc 1080
cgcgagatcg agtcgaagat cgaccgtcgc tctggcaagg agctggagaa ggctcccaag 1140
tcgatcaagt ctggcgacgc cgcgatcgtg cgcatgggtc cgcagaagcc tatgtgcgtg 1200
gaggtcttca acgactacgc gccactcggc cgctttgccg tgcgtgacat gcgccagacc 1260
gtcgtgtcgt gtatcatcaa ggccgtgacc aagaaggacg gttctggtgg taaggtgacg 1320
aaggctgcgg tgaaggcttc gaagaaataa 1350

```

<210> 865
 <211> 1052
 <212> DNA
 <213> *Cryptosporidium parvum*

```

<400> 865
aagctcaagg ctgagagaga aagaggtatt accatcgata ttgctttatg gcaattcgaa 60
accccaaaat accactacac tgtcattgat gccccaggct acagagattt catcaagaat 120
atgattactg gtacctctca agctgatggt gctttattgg ttgtcccagc cgatcgtttc 180
gaaggtgcct tctccaagga aggtcaaacc agagaacatg ctttattggc cttcactttg 240
ggtgtcagac aaatgattgt cggatattaac aagatggata cctgtgaata caagcaatct 300
cgttttgatg aaatcttcaa cgaagttgat ggttacctca agaaggttgg ttacaacacc 360
gagaagatcc cattcgttgc catttctggt ttcgttgggt ataatatggt tgagagatct 420
gacaagatgc catggtataa gggtaagacc ttagtcgaag cctcgcacac tatggaacca 480
ccaaagagac caactgacaa gccactccgt ctcccattac aagatgttta caagataggt 540
ggtgtaggta ctgtcccagt cggtcgtggt gaagctggta tcatcagacc aggtatgaat 600
gttaccttcg ctccagctgg tgttaccact gaagttaagt cagtagaaat gcaccatgag 660
cagatgccag aggcgcgtcc aggtgacaac gttggtttca atgttaagaa cgtctccatc 720
aaggatatca agagaggttt cgttgtctct gatgccaaga atgaccagc taagggtctg 780
gaagacttca ctgctcaagt tctcgtctct aaccaccag gtgaaatcaa gaacggttac 840
tctccagtcg ttgactgtca caccgctcac atttcttgca aattccagac tatcactgct 900
aagatggaca agagatctgg taaggttttg gaagaaaacc caagcttat caagtctggt 960
gatgctgctt tgggtgttat gcaacctttg aagccacttt gtgttgaggc cttcactgac 1020
taccacctc taggtcggtt cgctgtccgt ga 1052

```

<210> 866
 <211> 837
 <212> DNA
 <213> *Staphylococcus saprophyticus* ATCC 35552

```

<400> 866
caatgaagtt ccagaaatta acaatgcctt agtcgtagac gttgaaagag atgaaggtac 60
agtatctctt acattagaag tggcattaca acttggcgat gatgtcgtac gtacaattgc 120
aatggattctt actgatggtg ttaaactggt tacagaagtt cgagatagcg gagatagcat 180
cagtgttcca gttggtgatg ctacgttagg acgtgtgttt aatgttcttg gtgatacaat 240
tgacttagac gagaagcttg atacttctgt caaacgtgat ccaattcata gagaagcacc 300
tgcattcgat caattatcaa caaaagttag aatcttagaa acaggtatta aagtaattga 360
tttacttgca ccataatatta aaggtggtaa aatcggttta ttcgggtggcg ctggtgtagg 420
taaaacagta ttaattcaag aattaattaa taatatagct caagaacatg gtggattttc 480
agtattttgcc ggcgtagggtg aacgtacgcg tgaaggtaat gacttatact acgaaatgag 540
tgatagtggg gttattaaga aaacagctat ggtcttcgga caaatgaatg agccacctgg 600

```

```

tgcgcgtatg cgtgtttgctt tatcaggctt aacaatggct gaacacttcc gtgatgtaca 660
aggacaagat gttttactat ttattgataa catattcaga tttacgcaag ctgggttcaga 720
agtatcagca ctattaggct gtatgccatc agcgtttggt tatcaacctt cccttgctac 780
tgaaatgggt caattacaag aacgtattac atcaacaact aaaggatctg taacgtc 837

```

<210> 867
 <211> 818
 <212> DNA
 <213> *Zoogloae ramigera* ATCC 25935

```

<400> 867
aaggtattcg atgccttgaa aatggaaggc tccgagctga ccctggaagt acaacagcag 60
ctgggacgac gcattgtccg taccattgca ctgggtacct cgcacggcct gcgtcgcggc 120
atgatgatcc agaacaccgg caaacctatc atgggtgccg tcggtaaagc aaccctgggt 180
cgcacatcatg acgtgctggg taaccggatc gacgaatgag gcgcgggtcg tcacgaccag 240
atcgcttcga tccaccgcgc tcttctctgc gtgtgcccgt tcgccaaggg cggtaaagtc 300
ctggaaaccg gcattaaagt tattgacctg gtgtgcccgt tcgccaaggg cggtaaagtc 360
ggctctgttcg gcggtgcagg tgtgggcaag accgtgaaca tgatggaact gatcaacaac 420
atcgccaaag cacactcggg tctgtccgtg tttgcccggg tgggtgagcg taccctgtaa 480
ggtaacgact tctaccacga gatggctgac gccaaagtgg tcgatctgga aaatccagag 540
aactccaagg ttgcgatggg ctacggtcag atgaatgaac caccaggcaa ccgtctgcgc 600
gtggcgctga ccggtctgac catggctgaa gcattccgtg acgaaggcaa agacgttctg 660
ttcttcgtgg acaacatcta ccgcttcacc ctggccggta ccgaagtatc ggcactgctg 720
ggccgtatgc catcggctgt gggttaccag cctacgctgg ccgaagaaat gggtcgcctg 780
caagagcgca tcacttcgac caagaccggg tcgatcac 818

```

<210> 868
 <211> 778
 <212> DNA
 <213> *Staphylococcus saprophyticus* ATCC 43867

```

<400> 868
ctatcttagt agtatctgct gctgatggcc caatgccaca aactcgtgaa cacattcttt 60
tatcacgtaa cgttgggtgtt ccagcattag ttgtattctt aaacaaagtt gacatgggtg 120
acgatgaaga attattagaa ttagtagaaa tgggaagtctg tgacttatta agcgaatatg 180
acttcccagg tgacgatgta cctgtaatat ctgggttctgc attaaaagct ttagaaggcg 240
acgctgacta tgagcaaaaa atcttagact taatgcaagc tgttgatgac ttcattccaa 300
caccagaacg tgattctgac aaaccattca tgatgccagt tgaggacgta ttctcaatca 360
ctggctcgtg tactgttctg acaggccgtg ttgaacgtgg tcaaatcaaa gtcgggtgaag 420
aatcgaaat catcgggtatg caagaagaat caagcaaaac aactgttact ggtgtagaaa 480
tggtccgtaa attattagac tacgctgaag ctgggtgacaa cattgggtgca ttattacgtg 540
gtgtttcacg tgatgacgta caacgtggct aagtttttagc tgctcctggg actattacac 600
cacatacaaa attcaaagcg gatgtttacg ttttatctaa agatgaagggt ggtcgtcata 660
caccattctt cactaactac cgcccacaat tctatttccg tactactgac gtaactgggtg 720
ttgttaactt accagaagggt actgaaatgg ttatgcctgg cgataacggt gaaatgga 778

```

<210> 869
 <211> 640
 <212> DNA
 <213> *Enterococcus casseliflavus* strain R689

```

<400> 869
tggtcctatg cctcaaacac gtgaacacat cttgttatca cgtaacgttg gtgtaccata 60
catcgttggt ttcttaaaca aaatggatat ggttgatgac gaagaattac tagaattagt 120
tgaaatggaa gttcgtgact tattgtcaga atatgacttc ccaggcgacg atgttctctg 180
aatcgtcgtg tctgctttga aagctcttga aggcgatgct tcatacgaag aaaaaatcat 240
ggaattaatg gctgcagttg acgaatacgt tccaactcca gaacgtgaca ctgacaaaac 300
attcatgatg ccagtcgaag acgtattctc aatcactgga cgtgggtactg ttgctacagg 360
ccgtgttgaa cgtggacaag ttgcgcttgg tgacgaagtt gaaatcgttg gtattgctga 420
agaaactgct aaaacaactg taactgggtg tgaaatgttc cgtaaatgtg tagactatgc 480
tgaagcaggg gataacattg gtgcattgct acgtgggtgt gctcgtgaag acatccaacg 540
tggacaagta ttggctaaag ctgggtacaat cacacctcat acaaaattta aagctgaagt 600
ttacgtttta acaaaagaag aagggtggacg tcacactcca 640

```

<210> 870
 <211> 644
 <212> DNA
 <213> Enterococcus casseliflavus strain R754

```
<400> 870
gtcctatgcc tcaaacacgt gaacacatct tggtatcacg taacgttggt gtaccataca 60
tcgttggttt cttaaacaaa atggatatgg ttgatgacga agaattacta gaattagttg 120
aaatggaagt tcgtgactta ttgtcagaat atgacttccc aggcgacgat gttcctgtaa 180
tcgctgggttc tgctttgaaa gctcttgaag gcgatgcttc atacgaagaa aaaatcatgg 240
aattaatggc tgcagttgac gaatacgttc caactccaga acgtgacact gacaaacat 300
tcatgatgcc agtcgaagac gtattctcaa tcaactggac tgggtactgtt gctacaggcc 360
gtgttgaacg tggacaagtt cgcgttggtg acgaagttga aatcgttggt attgctgaag 420
aaactgctaa aacaactgta actggtggtg aaatgttccg taaattgtta gactatgctg 480
aagcagggga taacattggt gcattgctac gtggtggtgc tcgtgaagac atccaacgtg 540
gacaagtatt ggctaaagct ggtacaatca cacctcatac aaaatttaaa gctgaagttt 600
acgttttaac aaaagaagaa ggtggacgtc acacaccatt cttc 644
```

<210> 871
 <211> 637
 <212> DNA
 <213> Enterococcus flavescens strain R758

```
<400> 871
tcctatgcct caaacacgtg aacacatctt gttatcacgt aacgttggtg taccatacat 60
cgttgttttc ttaaacaaaa tggatatggt ttgatgacgaa gaattactag aattagttga 120
aatggaagtt cgtgacttat tgtcagaata tgacttccca ggcgacgat ttcctgtaat 180
cgctgggttct gctttgaaag ctcttgaagg cgatgcttca tacgaagaaa aaatcatgga 240
attaatggct gcagttgacg aatacgttcc aactccagaa cgtgacactg acaaaccatt 300
catgatgcca gtcgaagacg tattctcaat cactggacgt ggtactgttg ctacaggccg 360
tggtgaacgt ggacaagttc gcgttggtga cgaagttgaa atcgttggtg ttgctgaaga 420
aactgctaaa acaactgtaa ctggtggtga aatgttccgt aaattgttag actatgctga 480
agcaggggat aacattggtg cattgctacg tggggttgct cgtgaagaca tccaacgtgg 540
acaagtatta gctaaagctg gtacaatc acctcatac aaatttaag ctgaagttta 600
cgttttaaca aaagaagaag gtggacgtca cactcca 637
```

<210> 872
 <211> 643
 <212> DNA
 <213> Enterococcus gallinarum strain R631

```
<400> 872
gtcctatgcc tcaaactcgt gaacacatct tggtatcacg taacgttggc gtaccataca 60
tcgttggttt cttgaacaaa atggatatgg ttgatgacga agaattgcta gaattagttg 120
aaatggaagt tcgtgacctt ttgtctgaat atgacttccc aggcgacgat gttcctgtaa 180
tcgccgggttc tgctttgaaa gctcttgaag gagatccttc atacgaagaa aaaatcatgg 240
aattgatggc tgcagttgac gaatacgttc caactccaga acgtgatact gacaaacat 300
tcatgatgcc agtcgaagac gtattctcaa tcaactggac tgggtactgtt gctacaggcc 360
gtgttgaacg tggacaagtt cgcgttggtg atgaagtaga aatcgttggt attgctgacg 420
aaactgctaa aacaactgta acaggtggtg aaatgttccg taaattgtta gactatgctg 480
aagcagggga taacattggt gcattgctac gtggggttgc tcgtgaagac atccaacgtg 540
gacaagtatt ggctaaagct ggtacaatca cacctcatac aaaattcaaa gctgaagttt 600
atgttttgac aaaagaagaa ggtggacgtc acactccatt ctt 643
```

<210> 873
 <211> 641
 <212> DNA
 <213> Enterococcus gallinarum strain R691

```
<400> 873
gtcctatgcc tcaaactcgt gaacacatct tggtatcacg taacgttggc gtaccataca 60
tcgttggttt cttgaacaaa atggatatgg ttgatgacga agaattgcta gaattagttg 120
```

```

aaatggaagt tcgtgacctt ttgtctgaat atgacttccc aggcgacgat gttcctgtaa 180
tcgccgggttc tgctttgaaa gctcttgaag gagatccttc atacgaagaa aaaatcatgg 240
aattgatggc tgcagttgac gaatacgttc caactccaga acgtgatact gacaaaccat 300
tcatgatgcc agtcgaagac gtattctcaa tcaactggacg tggtagctgt gctacaggcc 360
gtgttgaaacg tggacaagtt cgcgttggtg atgaagtaga aatcgttggg attgctgacg 420
aaactgctaa aacaactgta acaggtgttg aaatgttccg taaattgtta gactatgctg 480
aagcaggggga taacattggg gcattgctac gtgggggttg tcgtgaagac atccaacgtg 540
gacaagtatt ggctaaagct ggtacaatca cacctcatac aaaattcaaa gctgaagttt 600
atgttttgac aaaagaagaa ggtggacgtc acactccatt c 641

```

<210> 874

<211> 681

<212> DNA

<213> Staphylococcus haemolyticus strain LSPQ 2514

```

<400> 874
accagcatta gtagtattct taaataaagt tgacatgggt gacgatgaag aattattaga 60
attagttgaa atggaagtac gtgacttatt atctgaatac gacttcccag gtgacgatgt 120
acctgtaatc gctgggttcag cattaanaagc tttagaaggc gatgctcaat acgaagaaaa 180
aatcttagaa ttaatgcaag cagttgatga ctacattcca actccagaac gtgattctga 240
caaaccattc atgatgccag ttgaggacgt attctcaatc actggctcgtg gtactgttgc 300
tacaggccgt gttgaacgtg ggcaaatcaa agttgggtgaa gaagttgaaa tcattgggtat 360
ccatgacact tctaaaacaa ctgttactgg ttagaaaatg ttccgtaaat tattagacta 420
cgctgaagct ggtgacaaca tcggtgcatt attacgtggg gttgctcgtg aagacgtaca 480
acgtgggtcaa gtattagctg ctccaggttc aatcacacct cacacaaaat ttaaagcaga 540
cgtatacgtt ttatctaaag acgaaggtgg acgtcacact ccattcttca caaactatcg 600
tccacaattc tatttccgta ctactgacgt aactgggtgt gttaacttac cagaaggtac 660
tgaaatgggt atgcctggcg a 681

```

<210> 875

<211> 675

<212> DNA

<213> Staphylococcus epidermidis strain R591

```

<400> 875
attatcacgt aacgttgggtg taccagcatt agttgtattc ttaaacaag ttgacatggg 60
agacgacgaa gaattattag aattagttga aatggaagtt cgtgacttat taagcgaata 120
tgacttccca ggtgacgatg tacctgtaat cgtgggttct gcattaaaag cattagaagg 180
cgatgctgaa tacgaacaaa aaatcttaga cttaatgcaa gcagttgatg attacattcc 240
aactccagaa cgtgattctg acaaacatt catgatgcca gttgaggacg tattctcaat 300
cactggctgt ggtactgttg ctacaggccg tgttgaaact ggtcaaatca aagttgggtg 360
agaagttgaa atcatcggtg tgcaagaaac ttctaaaaca actgttactg gtgtagaaat 420
gttccgtaaa ttattagact acgtggaagc tggtgacaac atcggtgctt tattacgtgg 480
tggtgcacgt gaagacgtac aacgtgggtc agtattagct gctcctgggt ctattacacc 540
acacacaaaa ttcaaagctg aagtatacgt attatctaaa gatgaagggtg gacgtcacac 600
tccattcttc actaactatc gccacaatt ctatttccgt actactgacg taactgggtg 660
tgtaaaactta ccaga 675

```

<210> 876

<211> 704

<212> DNA

<213> Staphylococcus epidermidis strain CSG 10

```

<400> 876
tcttattatc acgtaacgtt ggtgtaccag cattagttgt attcttaaac aaagttgaca 60
tggtagacga cgaagaatta ttagaattag ttgaaatgga agttcgtgac ttattaagcg 120
aatatgactt ccaggtgac gatgtacctg taatcgctgg ttctgcatta aaagcattag 180
aaggcgatgc tgaatacgaa caaaaaatct tagacttaat gcaagcagtt gatgattaca 240
ttccaactcc agaacgtgat tctgacaaac cattcatgat gccagttgag gacgtattct 300
caatcactgg tcgtgggtact gttgctacag gccgtgttga acgtgggtcaa atcaaagttg 360
gtgaagaagt tgaaatcatc ggtatgcacg aaacttctaa aacaactgtt actgggtgtag 420
aaatgttccg taaattatta gactacgtcg aagctgggtg caacatcggt gctttattac 480
gtgggtgttg acgtgaagac gtacaacgtg gtcaagttat agctgctcct ggttctatta 540

```

```
caccacacac aaaattcaaa gctgaagtat acgtattatc taaagatgaa ggtggacgtc 600
acactccatt cttcactaac tatcgccac aattctatct ccgtactact gacgtaactg 660
gtgttgtaaa cttaccagaa ggtacagaaa tggttatgcc tggc 704
```

<210> 877
 <211> 770
 <212> DNA
 <213> *Staphylococcus epidermidis* ATCC 35984

```
<400> 877
tcttagttgt atctgctgct gacgggtccaa tgccacaaac tcgtgaacac atcttattat 60
cacgtaacgt tgggtgacca gcattagttg tattcttaaa caaagttgac atggtagacg 120
acgaagaatt attagaatta gttgaaatgg aagttcgtga cttattaagc gaatatgact 180
tcccaggtga cgatgtacct gtaatcgctg gttctgcatt aaaagcatta gaaggcgatg 240
ctgaatacga acaaaaaatc ttagacttaa tgcaagcagt tgatgattac attccaactc 300
cagaacgtga ttctgacaaa ccattcatga tgccagttga ggacgtattc tcaatcactg 360
gtcgtggtag tgttgctaca ggccgtggtg aacgtgggtc aatcaaagtt ggtgaagaag 420
ttgaaatcat cggtatgcac gaaacttcta aaacaactgt tactggtgta gaaatgttcc 480
gtaaattatt agactacgct gaagctgggtg acaacatcgg tgctttatta cgtgggtgtg 540
cacgtgaaga cgtacaacgt ggtcaagtat tagctgtcc tggttctatt acaccacaca 600
caaaattcaa agctgaagta tacgtattat ctaaagatga aggtggacgt cacactccat 660
tcttactaa ctatcgcca caattctatt tccgtactac tgacgtaact ggtgttgtaa 720
acttaccaga aggtacagaa atggttatgc ctggcgacaa cgttgaaatg 770
```

<210> 878
 <211> 716
 <212> DNA
 <213> *Staphylococcus epidermidis* ATCC 35983

```
<400> 878
ttgtattctt aaacaaaagt gacatggtag acgacgaaga attattagaa ttagttgaaa 60
tggaagttcg tgacttatta agcgaatatg acttcccagg tgacgatgta cctgtaatcg 120
ctggttctgc attaaaagca ttagaaggcg atgctgaata cgaacaaaaa atcttagact 180
taatgcaagc agttgatgat tacattccaa ctccagaacg tgattctgac aaaccattca 240
tgatgccagt tgaggacgta ttctcaatca ctggctcgtg tactgttgct acaggccgtg 300
ttgaacgtgg tcaaatcaaa gttggtgaag aagttgaaat catcggtatg cagcaaactt 360
ctaaaacaac tgttactggt gtagaaatgt tccgtaaatt attagactac gctgaagctg 420
gtgacaacat cgggtgcttta ttacgtgggtg ttgcacgtga agacgtacaa cgtgggtcaag 480
tattagctgc tcctggttct attacaccac acacaaaatt caaagctgaa gtatacgtat 540
tatctaaaga tgaaggtgga cgtcacactc cattcttcac taactatcgc ccacaattct 600
atctccgtac tactgacgta actggtggtg taaacttacc agaaggtaca gaaatgggta 660
tgcttgccga caacgttgaa atgacagttg aattaatcgc tccaatcgct atcgaa 716
```

<210> 879
 <211> 640
 <212> DNA
 <213> *Enterococcus gallinarum* strain R764

```
<400> 879
cggtcctatg cctcaaactc gtgaacacat cttgttatca cgtaacgttg gcgtaccata 60
catcggtgtt ttcttgaaca aaatggatat ggttgatgac gaagaattgc tagaattagt 120
tgaaatggaa gttcgtgacc tattgtctga atatgacttc ccaggcgacg atgttcctgt 180
aatcgccggt tctgctttga aagctcttga aggagatcct tcatacgaag aaaaaatcat 240
ggaattgatg gctgcagttg acgaatacgt tccaactcca gaacgtgata ctgacaaacc 300
attcatgatg ccagtcgaag acgtattctc aatcactgga cgtggtactg ttgctacagg 360
ccgtgttgaa cgtggacaag ttcgcgttgg tgatgaagta gaaatcgttg gtattgctga 420
cgaaactgct aaaacaactg taacaggtgt tgaaatgttc cgtaaatgtt tagactatgc 480
tgaagcaggg gataacattg gtgcattgct acgtggggtt gctcgtgaag acatccaacg 540
tggaacaagta ttggctaaag ctggtacaat cacacctcat acaaaattca aagctgaagt 600
ttatgtttttg acaaaaagaag aaggtggacg tcacactcca 640
```

<210> 880

<211> 831
 <212> DNA
 <213> *Pseudomonas aeruginosa* strain PAO-1

```
<400> 880
cggcgcgatc ctggtttgcg cggctgccga cggcccatg cgcagaccc gcgagcacat 60
cctgctgtcc cgccaggtag gcgttcccta catcgtcgtg ttcctgaaca aggccgacat 120
ggctcgacgac gccgagctgc tggaaactggt cgagatggaa gttcgcgac tgctgaacac 180
ctacgacttc ccgggcgacg acactccgat catcatcgtt tccgcgctga tggcgctgga 240
aggcaaggat gacaacggca tcggcgtaag cgccgtgcag aagctggtag agaccctgga 300
ctcctacatt ccggagccgg ttcgtgccat cgaccagccg ttcctgatgc cgatcgaaga 360
cgtgttctcg atctccggcc gcggtaccgt ggtaaccggt cgtgtagagc gcggcatcat 420
caagggtccag gaagaagtgg aaatcgctcg catcaaggcg accaccaaga ctacctgcac 480
cggcggttgaa atgttccgca agctgctcga cgaaggctcg gctgggtgaga acgttgggtat 540
cctgctgctg ggcaccaagc gtgaagacgt agagcgtggc cagggttctgg ccaagccggg 600
caccatcaag ccgcacacca agttcgagtg cgaagtgtac gtgctgtcca aggaagaagg 660
tggtcgtcac accccgttct tcaagggtca ccgtccgcag ttctacttcc gtaccaccga 720
ygtgaccggt aactgcgaac tgccggaagg cgtagagatg gtaatgccgg gcgacaacat 780
caagatggtt gtcaccctga tcgctccgat cgccatggaa gatggcctgc g 831
```

<210> 881
 <211> 642
 <212> DNA
 <213> *Enterococcus casseliflavus* strain R421

```
<400> 881
cctatgcctc aaacacgtga acacatcttg ttatcacgta acgttggtgt accatacatc 60
gttggttttct taaacaaaat ggatatgggt gatgacgaag aattactaga attagttgaa 120
atggaagtgc gtgacttatt gtcagaatat gacttcccag gcgacgatgt tcctgtaata 180
gctgggttctg ctttgaaagc tcttgaaagg gatgcttcat acgaagaaaa aatcatggaa 240
ttaatggctg cagttgacga atacgttcca actccagaac gtgacactga caaaccattc 300
atgatgccag tcgaagacgt attctcaatc actggacgtg gtactgttgc tacaggccgt 360
gttgaacgtg gacaagttcg cgttggtgac gaagttgaaa tcgttggtat tgctgaagaa 420
actgctaaaa caactgtaac tggtgttgaa atgttccgta aattgttaga ctatgctgaa 480
gcaggggata acattggtgc attgctacgt ggtgttgctc gtgaagacat ccaacgtgga 540
caagtattgg ctaaagctgg tacaatcaca cctcatataa aatttaaagc tgaagtttac 600
gttttaacaa aagaagaagg tggacgtcac acaccattct tc 642
```

<210> 882
 <211> 636
 <212> DNA
 <213> *Enterococcus casseliflavus* strain R775

```
<400> 882
cctatgcctc aaacacgtga acacatcttg ttatcacgta acgttggtgt accatacatc 60
gttggttttct taaacaaaat ggatatgggt gatgacgaag aattactaga attagttgaa 120
atggaagtgc gtgacttatt gtcagaatat gacttcccag gcgacgatgt tcctgtaata 180
gctgggttctg ctttgaaagc tcttgaaagg gatgcttcat acgaagaaaa aatcatggaa 240
ttaatggctg cagttgacga atacgttcca actccagaac gtgacactga caaaccattc 300
atgatgccag tcgaagacgt attctcaatc actggacgtg gtactgttgc tacaggccgt 360
gttgaacgtg gacaagttcg cgttggtgac gaagttgaaa tcgttggtat tgctgaagaa 420
actgctaaaa caactgtaac tggtgttgaa atgttccgta aattgttaga ctatgctgaa 480
gcaggggata acattggtgc attgctacgt ggtgttgctc gtgaagacat ccaacgtgga 540
caagtattgg ctaaagctgg tacaatcaca cctcatataa aatttaaagc tgaagtttac 600
gttttaacaa aagaagaagg tggacgtcac acacca 636
```

<210> 883
 <211> 641
 <212> DNA
 <213> *Enterococcus faecalis* strain R422

```
<400> 883
ggctctatgc ctcaaacacg tgaacatatc ttattatcac gtaacgttgg tgtaccatac 60
```

```

atcgttgtat tcttaaaca aatggatatg gttgatgacg aagaattatt agaattagta 120
gaaatggaag ttcgtgactt attatcagaa tacgatttcc caggcgatga tgttccagtt 180
atcgcaggtt ctgctttgaa agcttttagaa ggcgacgagt cttatgaaga aaaaatctta 240
gaattaatgg ctgcagttga cgaatatatc ccaactccag aacgtgatac tgacaaacca 300
ttcatgatgc cagtcgaaga cgtattctca atcactggac gtggtactgt tgctacaggc 360
cgtgttgaac gtggtgaagt tcgcgttggt gacgaagtgt aaatcgttgg tattaagac 420
gaaacatcta aaacaactgt tacaggtgtt gaaatgttcc gtaaatattt agactacgct 480
gaagcaggcg acaacatcgg tgctttatta cgtggtgtag cacgtgaaga tatcgaacgt 540
ggacaagtat tagctaaacc agctacaatc actccacaca caaaattcaa agctgaagta 600
tacgtattat caaaagaaga aggcggacgt cacactccat t 641

```

<210> 884
 <211> 640
 <212> DNA
 <213> Enterococcus faecalis strain R575

```

<400> 884
tatgcctcaa acacgtgaac atatcttatt atcacgtaac gttggtgtac catacatcgt 60
tgtattctta aacaaaatgg atatgggttga tgacgaagaa ttattagaat tagtagaaat 120
ggaagttcgt gacttattat cagaatacga tttcccaggc gatgatgttc cagttatcgc 180
aggttctgct ttgaaagctt tagaaggcga cgagtcttat gaagaaaaaa tcttagaatt 240
aatggctgca gttgacgaat atatcccaac tccagaacgt gatactgaca aaccattcat 300
gatgccagtc gaagacgtat tctcaatcac tggacgtggt actggtgcta caggccgtgt 360
tgaacgtggt gaagttcgcg ttggtgacga agttgaaatc gttggtatta aagacgaaac 420
atctaaaaca actggttacag gtgttgaaat gttccgtaaa ttattagact acgctgaagc 480
aggcgacaac atcggtgctt tattacgtgg tggtgcacgt gaagatatcg aacgtggaca 540
agtattagct aaaccagcta caatcactcc acacacaaaa ttcaaagctg aagtatacgt 600
attatcaaaa gaagaaggcg gacgtcacac tccattcttc 640

```

<210> 885
 <211> 632
 <212> DNA
 <213> Enterococcus faecium strain R492

```

<400> 885
tgctcaaac tcgtgaacac atcctattgt ctcgtcaagt tgggtgttctt tacatcgttg 60
tattcttgaa caaagtagac atgggtgatg acgaagaatt actagaatta gttgaaatgg 120
aagttcgtga cctattaaca gaatacgaat tccctgggtga cgatgttctt gtagttgctg 180
gatcagcttt gaaagctcta gaaggcgacg cttcatacga agaaaaaatt cttgaattaa 240
tggctgcagt tgacgaatac atcccaactc cagaacgtga caacgacaaa ccattcatga 300
tgccagttga agacgtgttc tcaattactg gacgtggtac tgttgctaca ggtcgtggtg 360
aacgtggaca agttcgcggt ggtgacgaag ttgaagttgt tggatttgct gaagaaactt 420
caaaaacaac agttactggt gttgaaatgt tccgtaaat gttagactac gctgaagctg 480
gagacaacat tgggtgcttta ctacgtggtg ttgcacgtga agacatocaa cgtggacaag 540
tttttagctaa accaggtaca atcacacctc atacaaaatt ctctgcagaa gtatacgtgt 600
tgacaaaaga agaaggtgga cgtcatactc ca 632

```

<210> 886
 <211> 640
 <212> DNA
 <213> Enterococcus faecium strain R576

```

<400> 886
cggcccaatg cctcaaaactc gtgaacacat cctattgtct cgtcaagttg gtgttcctta 60
catcggttga ttcttgaaca aagtagacat ggttgatgac gaagaattac tagaattagt 120
tgaaatggaa gttcgtgacc tattaacaga atacgaattc cctggtgacg atgttcctgt 180
agttgctgga tcagctttga aagctctaga aggcgacgct tcatacgaag aaaaaattct 240
tgaattaatg gctgcagttg acgaatacat cccaactcca gaacgtgaca acgacaaacc 300
attcatgatg ccagttgaag acgtgttctc aattactgga cgtggtactg ttgctacagg 360
tcgtgttgaa cgtggacaag ttcgcgttgg tgacgaagtt gaagttggtg gtattgctga 420
agaaaacttca aaaacaacag ttactggtgt tgaaatgttc cgtaaatgtg tagactacgc 480
tgaagctgga gacaacattg gtgctttact acgtggtgtt gcacgtgaag acatccaacg 540
tggacaagtt ttagctaaac caggtacaat cacacctcat acaaaattct ctgcagaagt 600

```

atacgtgttg acaaaagaag aaggtggacg tcataactcca

640

<210> 887
<211> 806
<212> DNA
<213> Zoogloae ramigera ATCC 25935

<400> 887
atcctggttt gctccgcagc tgacggccca atgccacaga cccgcgagca catcctgctg 60
gcccgcgaag ttggcggtcc atacatcatc gtgttcctga acaagtgcga cctgggtgac 120
gacgcagaac tgctggaact ggtcgaaatg gaagtgcgtg aattgctgtc gaaatacag 180
ttcccaggcg acgacgtacc aatcatcaag gggtcggcac gtatggcgct ggaaggcaaa 240
gaaggcgaga tgggcgttga cgccatcatg cgtctggccg atgcaactga cagctacatc 300
cctacgccag agcgcgcagt cgatggcgcc ttcctgatgc cagtgggaaga cgtgttctcg 360
atctcgggtc gcggtaccgt tgtgaccggt cgtatcgagc gcggcgatg caaggctggc 420
gaagagatcg aaatcgtcgg cattatcgac accgtcaaaa ccacttgac cggcggtgaa 480
atgtttccga agtgcgtgga ccagggtcaa gccggcgaca acgttggtct gctgctgcgc 540
ggcaccgaag gtgaagacgt acagcgtggt cagggttctg ccaagccagc gtcgatcaag 600
ccgcacaacc acttcaccgg cgagatctac gttctgtcga aagatgaagg cggccgtcac 660
accccgttct tcaacaacta tcgtccacag ttctacttcc gtacgactga cgtgaccggt 720
tcgatcgaac tgccagcaga caaagaaatg gtcatgccag gcgacaacgt gtcgatcacc 780
gtcaagctga tcaaccgat cgcgat 806

<210> 888
<211> 634
<212> DNA
<213> Enterococcus faecalis strain R503

<400> 888
tatgcctcaa acacgtgaac atatcttatt atcacgtaac gttggtgtac catacatcgt 60
tgtattctta aacaaaatgg atatggttga tgacgaagaa ttattagaat tagtagaat 120
ggaagtctgt gacttattat cagaatacga tttcccaggc gatgatgttc cagttatcgc 180
aggttctgct ttgaaagctt tagaaggcga cgagtcttat gaagaaaaaa tcttagaatt 240
aatggctgca gttgacgaat atatcccaac tccagaacgt gatactgaca aaccattcat 300
gatgccagtc gaagacgtat tctcaatcac tggacgtggt actggtgcta caggccgtgt 360
tgaacgtggt gaagttcgcg ttggtgacga agttgaaatc gttggtatta aagacgaaac 420
atctaaaaca actgttacag gtgttgaaat gttccgtaaa ttattagact acgctgaagc 480
aggcgacaac atcgggtgctt tattacgtgg tgtagcacgt gaagatatcg aacgtggaca 540
agtattagct aaaccagcta caatcactcc acacacaaaa ttcaaagctg aagtatacgt 600
attatcaaaa gaagaaggcg gacgtcacac tcca 634

<210> 889
<211> 493
<212> DNA
<213> Aspergillus fumigatus ATCC 14110

<400> 889
tgtcttcac caggaattga ttgtgagtcg ttccacatgc tcacctagtt ttcgctcgat 60
ctttttacta acgcaaacca tgtagaacaa cattgccaaag gccacgggtg gttactccgt 120
cttcactggt gttggtgagc gtactcgtga gggtaacgat ctgtaccacg aaatgcagga 180
gactggtgtc attcagctcg aggggtgaatc caaggctcga ctggtgttcg gacagatgaa 240
cgagcccccc ggtgcccgctg cccgtgtcgc ccttaccggt ctgaccattg ccgagtactt 300
ccgtgacgag gagggtcagg acgtgctgct cttcattgac aacattttcc gtttcacca 360
ggccggttct gaggtgtctg cccttctcgg tcgtatcccc tctgccgtcg gttaccagcc 420
caccctggcc gtcgacatgg gtggtatgca ggagcgtatc accaccacca agaagggttc 480
tattacctcc gtc 493

<210> 890
<211> 466
<212> DNA
<213> Penicillium marneffeii ATCC 64101

<400> 890
ttgattgtac gtctttacct ttctgcctga ctgtttacga caactaacga aagcgtagaa 60
caacattgcc aaggetcacc gtggttactc tgtcttactc ggtgtcgggtg aacgtactcg 120
tgagggtaac gatttgtacc acgaaatgca ggaaactggg gtcattcagc tcgaggggtga 180
atccaaggtc gccctcgtgt tcggtcagat gaacgagccc cccggtgccc gtgcccgtgt 240
cgctcttact ggtttgacca ttgccgagta cttccgtgac gaggaagggtc aggacgtgct 300
tctcttcatt gacaacattt tccgtttcac tcaggccggg tctgagggtgt ctgcccttct 360
gggtcgtatc ccctctgccg tcggttacca gcccacccct gccgtcgaca tgggtatcat 420
gcaggagcgt attaccacca ccaccaaggg ttccatcacc tccgtc 466

<210> 891
<211> 478
<212> DNA
<213> *Paecilomyces lilacinus* ATCC 42570

<400> 891
aggagctgat caacaacatc gccaaaggctc acgggtgggta ctccgtcttc actgggtgtcg 60
gtgagcgtac ccgtgagggg aacgatctgt accacgaaat gcaggagacc tcgggtcattc 120
agctcgaggg cgagtctaag gtggccctgg tctttgggtca gatgaacgag cccccgggtg 180
ctcgtgcccg tgctcgtctt actgggtctta ccgtcgccga gtacttccgt gaccaggagg 240
gtcaggatgg ttagttctcg tccactcatg ccgaaacatg tgcgtgttcc gaggctaata 300
aacgtgccag tgctgctttt catcgacaac attttccgat tcacacaggg cggttccgag 360
gtgtctgccc tgctgggtcg tatccccctc gccgtcggtt accagcccac cctcgccgtc 420
gacatgggtg gcatgcagga gcgtatcacc accaccaaga agggctctat cacctccg 478

<210> 892
<211> 481
<212> DNA
<213> *Penicillium marneffeii* ATCC 58950

<400> 892
gtctttatcc aggagttgat tgtacgtctt tacctttctg cctgactgtt tacgacaact 60
aacgaaagcg tagaacaaca ttgccaaaggc tcacgggtggg tactctgtct tcactgggtgt 120
cgggtgaacgt actcgtgagg gtaacgattt gtaccacgaa atgcaggaaa ctgggtgtcat 180
tcagctcgag ggtgaatcca aggtcgccct cgtgttcggg cagatgaacg agcccccccg 240
tgcccgtgcc cgtgtcgttc ttactgggtt gaccattgcc gagtacttcc gtgacgagga 300
aggtcaggac gtgcttctct tcattgacaa cattttccgt ttactcagg ccggttctga 360
ggtgtctgcc cttctgggtc gtatccccctc tgccgtcggt taccagccca cccttgccgt 420
cgacatgggt atcatgcagg agcgtattac caccaccacc aagggttcca tcacctccgt 480
c 481

<210> 893
<211> 1208
<212> DNA
<213> *Sporothrix schenckii* ATCC 14285

<400> 893
ctcgtccgtg gtgctaaggc cactgacaact ggttsccccca ttaccatccs cgctcgcccc 60
ggtaccctcg gtcgcatcat gaacgtcacc ggtgacccga tcgacgagcg cgggtcccatc 120
aagaccgaca agttccgtcc catccacgct gaggtcctccg agttcgttga ccagtcgacc 180
accgctgagg ttctcgtgac tggtatcaag gtcgtcgatc tgcttgtctc ctacgcccgt 240
ggtggttaaga ttggtctgtt tggcgggtgcc ggtgttggtc agaccgtgtt catccaggag 300
ctcatcaaca acatcgccaa ggcccacggg ggttactccg tcttcaccgg tgtcggcgag 360
cgtacccgtg agggtaacga tctgtaccac gaaatgcagg agacctctgt cattcagctt 420
gacgggtgact ccaaggctcg cctgggtgtc ggtcagatga acgagccccc tgggtgctcgt 480
gcccgtgtcg ccttgaccgg tttgactgtc gctgagtact tccgtgacga ggagggccag 540
gatggtatgt tttgaattat ttcttctgtc tacagttcca aatcgaagaa ttactaactt 600
gtcagtgtct ctcttcatcg acaacatttt ccgcttcacc caggccgggt ctgaggtgtc 660
tgcccttctg ggtcgtatct cctccgctgt cgggttaccag cccacgctcg cctgggacat 720
gggtctgatg caggagcgta ttaccaccac ccgcaagggc tcaattacct ccgtccaggc 780
cgtctacgtg cccgctgacg atctgacgga tcccgcctcc gccaccacct tcgcccattc 840
ggacgccacc actgtgtgtt cccgaggtat ctctgagctg ggtatctacc ccgtgtctga 900
ccccctcgac tccaagtcgc gtatgtctgga ccccgctatt gtcgggtgacg accactacga 960

gaccgccact cgcgtccagc agatcctcca agagtacaag tcgctgcagg acatcatcgc 1020
cattctgggt atggacgagc tgtctgaggc cgacaagctt acagtcgagc gtgctcgtaa 1080
gatccagcgt ttcctgagcc agccgttcac ggtcgcgcag gtcttctact gtatcgaagg 1140
ccagctggtc gatctgaagg acactatcgc ttcgttcaag gctatcctga gcggtgaggg 1200
tgacagcc 1208

<210> 894
<211> 534
<212> DNA
<213> *Malbranchea filamentosa* ATCC 48174

<400> 894
ttcaggaact tattgtaagc cgccctcttt atgcattgag ggtgaataag aaggctgaca 60
ggtaatagaa caacattgcc aaggctcacg gtggttactc cgtgttctact ggtgtcgggtg 120
agcgtacccg tgaaggaaac gatctgtacc atgaaatgca ggaaaccgc gtcattccagc 180
ttgatggcga gtctaaggtc gcccttggtg tcggtcagat gaacgagccc cctggagccc 240
gtgcccgtgt cgctcttact ggtcttaccg ttgccgaata cttccgtgac gaggagggcc 300
aagatggtac gcctttttac tcttcttatt cttcgggtcg gactacagaa ctaacctgct 360
ccagtgttc tcttcattga taacattttc cgtttcacac aagccgggtc tgagggtgtc 420
gccttgcttg gacgtattcc ctctgccgtc ggttaccagc ccactctcgc cgtcgacatg 480
ggtggtatgc aggaacgtat cacaaccacc aacaagggtt ccattacttc cgtg 534

<210> 895
<211> 448
<212> DNA
<213> *Paecilomyces lilacinus* ATCC 60735

<400> 895
caaggctcac ggtggttact ccgtcttcac tgggtgctggg gagcgtaccc gtgagggtaa 60
cgatctgtac cagcaaatgc aggagacctc ggtcattcag ctcgagggcg agtctaagggt 120
ggccctgggtc tttgggtcaga tgaacgagcc cccgggtgct cgtgcccgtg tcgctcttac 180
tggctcttacc gtccgcgagt acttccgtga ccaggagggt caggatggtt agttctcgtc 240
cactcatgcc gaaacatgtg cgtgttccga ggctaatacaa cgtgccagtg ctgcttttca 300
tcgacaacat tttccgattc acccaggccg gttccgaggt gtctgccctg ctgggtcgta 360
tcccctctgc cgtcgggttac cagcccaccc tcgccgtcga catgggtggc atgcaggagc 420
gtatcaccac caccaagaag ggctctat 448

<210> 896
<211> 483
<212> DNA
<213> *Aspergillus niger* ATCC 9508

<400> 896
attcaggagc tgattgtaag ttgccaatcc atgaactgga gatttggtgt gacctataga 60
actaacaat tatttagaac aacatcgcca aggtcacgg tggttactcc gtcttctgtg 120
gtgtcgggtga gcgtactcgt gagggtaacg atctgtacca cgaaatgcag gagactggtg 180
tcattccagct cgagggtgac tccaagggtc ctctggtctt cggtcagatg aacgagcccc 240
cgggtgcccg tgcccgtgtc gcccttaccg gtctgacctg tgccgagtac ttccgtgacg 300
aggaggggtca ggacgtgctg ctcttcattg acaacatttt ccgtttcacc caggccgggt 360
ctgaggtgtc tgcccttctg ggtcgtatcc cctctgccgt cggttaccag ccactctgtg 420
ccgtcgacat ggtggtatg caggagcgta ttaccaccac caccaagggt tccattacct 480
ccg 483

<210> 897
<211> 1124
<212> DNA
<213> *Aspergillus fumigatus* ATCC 14110

<400> 897
aagctcaagt ccgagcgtga gcgtgggtatc accatcgaca ttgccctctg gaagttccag 60
actcccaagt atgaggtcac tgatcatcgtt aagctcgact cgccccgata tgttttggtg 120
ctgtagctaa cacgatctga agatgcccc ggtaaccgtg acttcatcaa gaacatgatc 180

actggtacct	cccaggctga	ctgcgctatc	ctcatcattg	cctccggtag	tggtgagttc	240
gaggctggta	tctccaagga	tggccagacc	cgtgagcacg	ctctgctggc	tttcaccctc	300
ggtgtcaagc	agctcatcgt	cgccctcaac	aagatggaca	cctgcaagtg	gtccgaggat	360
cgttacaacg	aaattgtcaa	ggaaacctcc	aacttcatca	agaaggctcg	ctacaacccc	420
aaggccgttc	ccttcgtccc	catctctggc	ttcaacgggtg	acaacatgct	tgagccctcc	480
tccaactgcc	cctggtacaa	gggatgggag	aaggagacca	aggccggcaa	ggtcactggg	540
aagaccctca	tcgaggccat	cgacgccatt	gagcccccctg	tccgtcccty	caacaagccc	600
ctccgtcttc	ccctccagga	tgtctacaag	atctctggta	tcggaacggg	ccctgtcggc	660
cgtgtcgaga	ccggtatcat	caagcccggc	atggtcgtca	ccttcgcccc	cgccaacgtc	720
accactgaag	tcaagtccgt	cgagatgcac	caccagcagc	tccaggaggg	tgtccccggg	780
gacaacgtcg	gtttcaacgt	caagaacgtt	tccgtcaagg	aagtccgccc	tggtaacgtc	840
tgcggtgact	ccaagaacga	tccccctcag	gggtcgtcct	ccttcaacgc	ccagggtcatc	900
gtcctcaacc	accccgggtc	gggtacgccc	ccgtcctcga	ctgccacact		960
gcccacattg	cttgcaagtt	ctctgagctg	cttgagaaga	ttgaccgccc	taccggcaag	1020
tctgttgaga	acaaccccaa	gttcatcaag	tccggtgatg	ccgccatcgt	gaagatgggt	1080
ccttccaagc	ccatgtgtgt	cgagtccttc	actgactacc	cccc		1124

<210> 898
 <211> 1363
 <212> DNA
 <213> *Penicillium marneffei* strain WSA-214

<400> 898						
ctcaaggctg	agcgtgagcg	tggtatcacc	atcgatatgg	ctctctggaa	gttccagact	60
gccaagtacg	aggttaccgt	cattgacgcc	cccggtcacc	gtgatttcat	caagaacatg	120
atcactggta	cctcccaggc	cgattgcgct	attctcatca	ttgcctctgg	tactgggtgaa	180
ttcgaggctg	gtatctccaa	ggatggccag	actcgtgagc	acgctctttt	ggcttttcacc	240
ctcgggtgtcc	gtcagctcat	tgttgccctc	aacaagatgg	acacttgcaa	gtgggtctcag	300
gggtgagtact	cgtaacctgcg	tttgcccttg	aatatcttac	taatgcacca	tagatcggtta	360
caacgaaatt	gtcaaggaga	cttccaactt	catcaagaag	gtcggataca	accctaagaa	420
cgttcctttc	gttcttatct	ccggtttcaa	cggtgacaac	atgcttgagc	cctcccccaa	480
ctgccccctgg	tacaagggtt	gggagaagga	gaccaaggcc	ggtaagggtca	ctggtaagac	540
cctcctcgag	gccatcgacg	ccattgagcc	ccctacccgt	cccggccaaca	aggttagtcc	600
ctcctcgact	actcaaaccc	tcctcataag	ttcatgatta	cgactcgttc	acagccctc	660
cgtcttcccc	tccaggatgt	ctacaagatc	gggtggtattg	gaacggttcc	cgtcgggtcgt	720
gttgagactg	gtaccatcgt	tcctggtatg	gttgtcacct	tgtaagtcac	tctcctcgt	780
tatcctacct	gaaatcatca	tgtgctaact	tgacactcag	cgctcccgcc	aacgtcacca	840
ctgaagtcaa	gagtgttgaa	atgcaccacc	agcagctcac	tgccgggtcag	cccgggtgaca	900
acgttggttt	caacgtgaag	aacgtctccg	tcaaggaaat	ccgtcgtggg	aacgttgctg	960
gtgacagcaa	gaacgacccc	cctgccgggtg	ctgcctcctt	caacgcccag	gtcatcgtcc	1020
tcaaccaccc	cggtcagggtc	gggtcgtgggt	acgccccagt	cctcgattgc	cacactgccc	1080
acattgcttg	caagttcgct	gagctcctcg	agaagattga	ccgtcgtacc	ggaaagtctg	1140
ttgaggacca	ccccaaagttc	atcaagtcgg	gtgacgtgc	catcgtcaag	atgattcctt	1200
ccaagcccat	gtgtgttgag	gctttcacgg	agtaccctcc	tctcgggtcgt	ttcgccgttc	1260
gcgagtaagt	tttatctccg	ttgtctatct	tccatccttc	ccttctcctc	cgtcttccat	1320
atatatTTTT	tcagttatat	gtgactaacc	acaaatcacg	gga		1363

<210> 899
 <211> 1147
 <212> DNA
 <213> *Piedraia hortai* ATCC 24292

<400> 899						
caagctgaaa	gccgagcgtg	agcgtgggtat	cactatcgac	attgccctct	ggaagttcga	60
gactcccaag	tactatgtca	ccgtcattgg	tacgtcgcac	tatctcactc	ctcacagaag	120
cacgctccta	acatcacaca	gacgctcccc	gtcacccgtga	tttcatcaag	aacatgatca	180
ctgggtaccta	ccaggccgac	tgcgctatcc	tcatatcgc	tgccgggtact	gggtgagttcg	240
aggctgggtat	ctccaaggat	ggccagactc	gtgagcacgc	cctgctcgcc	tacaccctcg	300
gtgtgctgca	gctcatcgtc	gccatcaaca	agatggacac	caccaagtgg	tctgaggccc	360
gttaccagga	gatcatcaag	gagacctcca	acttcatcaa	gaaggctcgg	tacaacccca	420
agaccgtcgc	tttctgtcccc	atctctggct	tcaacggcga	caacatgctt	gccccctcca	480
ccaactgccc	ctgggtacaag	ggatgggagc	gtgaggtcaa	gggcaacaag	cagaccggca	540
agaccctcct	cgaggccatt	gacggcattg	agccccccaa	gcgtccttcc	gacaagcccc	600
tccgtcttcc	tctccaggat	gtttacaaga	tcgggtggat	cggaactggt	cctgtcggcc	660

```

gtatcgagac tgggtgtcctc aagccccgga tgggtcgttac cttcgtctccc gccaacgtca 720
ccactgaagt caagtccgtc gagatgcacc acgagcagct cactgagggt cttcccgggtg 780
acaacgtcgg tttcaacgtg aagaacgttt ccgtcaagga catccgccgt ggtaacgttg 840
ccagtgaactc caagaacgac cccgctctgg gtgcccgttc tttcgacgcc cagggtcatcg 900
tcctcaacca ccccggtcag gtcgggtgctg gttacgcccc ggctcctcgat tgccacactg 960
cccacattgc ttgcaagttc tccgagatca aggagaagat cgaccgccgt accggcaagt 1020
ctgttgagga cgcccccaag ttcattcaagt ctggtgactc tgccatcgtc aagatgggtc 1080
cctccaagcc catgtgcgtt gaggctttca ccgactacce tcctctgggc cgttttcgccg 1140
tccgtga                                     1147

```

<210> 900
 <211> 1150
 <212> DNA
 <213> *Paecilomyces lilacinus* ATCC 60735

```

<400> 900
ctcaaggccg agcgtgagcg tggatatcacc atcgacattg ccctctggaa gttcagagact 60
cccaagtact atgtcaccgt catttggtacg tcgactcgcg cgagactggg cgcaattttcc 120
acgtcgctaa cgtgcttgaa cagacgctcc cggccaccgt gacttcatca agaacatgat 180
cactgggtacc tcccaggctg actgcgctat cctcattatc gctgccggca ctgggtgagtt 240
cgaggctggg atctccaagg atggccagac ccgtgagcac gctctgctcg cctacaccct 300
cgggtgttaag cagctcatcg tcgctatcaa caagatggac accaccaagt ggtctgaggc 360
ccgtttccag gagatcatca aggagacctc caacttcatc aagaaggctg gctacaacct 420
caagaccgtc gctttcgtcc ccatctctgg tttccacggc gacaacatgc tttcccctc 480
caccaactgc ccctgggtaca agggctggga gaaggagacc aaggctggca agtccaccgg 540
caagaccctc cttgaggcca tcgactccat cgagccccc aagcgcccca gcgacaagcc 600
cctccgcctt ccccttcagg atgtgtacaa gatcgccggt atcggcacag tccctgtcgg 660
ccgtatcgag actgggtgtca tcaagcccg catggtcggt accttcgctc cttccaacgt 720
caccaccgaa gtcaagtcgg ttgagatgca ccacgagcag ctctccgagg gtgtcccgg 780
tgacaacgtc ggcttcaacg tcaagaacgt ctccgtcaag gagatccgtc gtggcaacgt 840
cgccgggtgac tccaagaacg acccccctct ggggtgccgt tctttcgatg ccagggtcat 900
cgctcctcaac caccgccggc aggtcggtgc tggctacgcc cccgtcctcg actgccacac 960
cgccacatt gcctgcaagt tcgcccagat caaggagaag atcgaccgcc gtaccggcaa 1020
gtctgtcgag tccgccccca agttcatcaa gtctggcgac tctgccatcg tcaagatgat 1080
tccctccaag cccatgtgcg ttgaggcttt caccgactac cctcctctgg gccgcttcgc 1140
cgtccgtgac                                     1150

```

<210> 901
 <211> 751
 <212> DNA
 <213> *Paracoccidioides brasiliensis* ATCC 32075

```

<400> 901
taccactaag tgggtccgaga cccgattcaa tgaaattatc aaggaagtca ccaatttcat 60
taagaaggtc ggatataacc ccaagactgt tcctttcggt cccattttctg gtttcgaggg 120
tgacaacatg atcgagccct ctgccaaactg cccatgggtac aagggtggtt ccaaggagac 180
tgctcagggc aagtactctg gcaagaccct tcttgaggcc atcgacgcca ttgagccccc 240
caccgcgtct accgataaac ctctccgtct tcccctccag gatgtctaca agatctccgg 300
tattggcact gttcctgtcg gacgtgttga gactggagtc atcaagcccg gtatgggtcgt 360
gaccttcgct cccgccaacg tcaccactga agtcaagtcg gtcgaaatgc accaccagca 420
gcttaccgcc ggtaaccccg gtgacaacgt cggttcaac gtcaagaatg tttccgtcaa 480
agaagtccgc cgtggtaacg ttgccgggtga ctctaagaat gatccccc aaaggctgcga 540
ttccttcaat gccaggtca tcgtcctcaa ccacctgggt caggttggcg ctggttatgc 600
cccagtcctc gactgccata ctgcccacat tgcttgcaaa ttcgctgagc tccttgagaa 660
gattgatcga cgaaccggaa agtctgttga gaacaacccc aagttcatca agtccgggtga 720
tgctgctatc gtcaagatga ttccttccaa g                                     751

```

<210> 902
 <211> 1056
 <212> DNA
 <213> *Sporothrix schenckii* ATCC 7968

<400> 902

```

cgtgagcgcg gtatcaccat cgatattgct ctgtggaagt tcgagacccc caagtactac 60
gtcacggtca ttgacgcccc cgggtcatcg gatttcatca agaacadatgat cactgggtacc 120
tcgcaggccg actgcgccat tctcatcatt gccgtggta ctgggtgagtt cgaggctggg 180
atctccaagg atggccagac tcgtgagcac gctctgtctg cctacaccct ggggtgtgcg 240
cagctgatcg tcgccatcaa caagatggac acggccaagt gggctgaggc tcgttaccag 300
gagatcatca aggagacctc caacttcac aagaaggctg gctacaaccc caagactgtt 360
gccttcgtcc ccatctcggg cttccacggc gacaacatgc ttactccctc gaccaactgc 420
ccctgggtaca agggctggga gaaggagggc aagagcgcca aggttaccgg taagactctg 480
ctggacgcca ttgacgcggt cgagccccc aagcgcccca cggacaagcc cctgcgtctg 540
ccctccagg atgtctacaa gatcgccggt atcggcactg tccctgtcgg ccgtatcgag 600
actgggtgtcc tgaagcccg catggctgct acctttgccc cgtccaacgt caccactgaa 660
gtcaagtccg tcgagatgca ccacgagcag ctgtgtgagg gtgttcccgg cgacaacgtc 720
ggcttcaacg tcaagaacgt ctccgtcaa gagatccgtc gtggcaacgt tgccggtgac 780
tccaagaacg accccccctc gggcgccgcc accttcaacg ccagggtcat tgctctgaac 840
caccgcggcc aggtcggcaa cggctacgcc ccggttctgg actgccacac cgcccacatt 900
gcctgcaagt tcaccgagat ccttgagaag atcgaccgcc gtaccggcaa gtcgggtgag 960
aacaaccca agttcatcaa gtcgggtgac gccgccattg tcaagctgac gccctcgaag 1020
cccatgtgcg ttgaggcctt cactgactac cccct 1056

```

<210> 903
 <211> 1366
 <212> DNA
 <213> Penicillium marneffe ATCC 58950

```

<400> 903
caaggctgag cgtgagcggtg gtatcaccat cgatattgct ctctggaagt tccagactgc 60
caagtacgag gttaccgtca ttgacgcccc cgggtcacgt gatttcatca agaacadatgat 120
cactgggtacc tccaggccg attgcgctat tctcatcatt gccctctggta ctgggtgaatt 180
cgaggctggg atctccaagg atggccagac tcgtgagcac gctcttttgg ctttaccct 240
cgggtgtccgt cagctcattg ttgccctcaa caagatggac acttgcaagt ggtctcaggg 300
tgagtactcg tacctgcgtt tggccttgaa tatcttacta atgcaccata gatcggtaca 360
acgaaattgt caaggagact tccaacttca tcaagaaggc cggatacaac cctaagaacg 420
ttcctttcgt tcctatctcc ggtttcaacg gtgacaacat gcttgagccc tcccccaact 480
gcccctggta caagggttgg gagaaggaga ccaaggccgg taaggctcact ggtaagaccc 540
tcctcgaggc catcgacgcc attgagccc ctaccgtcc cgccaacaag gttagtccct 600
cctcgactac tcaaaccctc ctcataagtt cagattactg actcgttcac agccctccg 660
tcttccccctc caggatgtct acaagatcgg ttgtattgga acggttcccg tcggtcgtgt 720
tgagactggg accatcggtt ctgggtatgg ttgtacettg taagtactc tcctcgctta 780
tcctacctga aatcatcatg tgctaacttg acactcagcg ctcccggcaa cgtcaccact 840
gaagtcaaga gtgttgaat gcaccaccag cagctcactg ccggtcagcc cgggtgacaac 900
gttgggtttca acgtgaagaa cgtctcgtc aaggaaatcc gtcgtggtaa cgttgctggg 960
gacagcaaga acgaccccc tgccggtgct gccctcttca acgcccaggt catcgtctc 1020
aaccaccccg gtcaggctcg gctcctcgag aagattgacc gtcgtaccgg aaagtctgtt 1140
attgcttgca agttcgctga gtcctcagc caagttgacc tcgtcaagat gattccttcc 1200
gaggaccacc ccaagttcat caagtcggg tacctctcctc tcggtcgttt cgccgttcgc 1260
aagcccatgt gtgttgaggc ttaccacgag taccctctc ttctcctccg tcttccatat 1320
gagtaagttt tatctccgtt gtctatcttc catccttccc tctcctccg aatagc 1366
atattttttc agttatatgt gactaaccac aaatcacggg

```

<210> 904
 <211> 841
 <212> DNA
 <213> Curvularia lunata ATCC 26425

```

<400> 904
ctattatcgt tgttgccgct tccgacggtc aaatgcccc gactcgtgag catctgctgc 60
tcgcccggca ggtcgggtgtc cagaagatcg ttgtcttctg caacaagggtc gatgctgtg 120
aggacaagga gatgttgag ctcgtcgaga tggagatgcy cgaattgctc agcagctacg 180
gcttcgaggg cgacgagact cccatcatca tgggatctgc cctctgcgcc attgagggcc 240
gcgaacctga gattggtgtc aaccgaattg atgagctgct cgaggccggt gatacttgg 300
tccccacccc tcagcgtgag accgacaagc ctttctcat ggcgctcgag gatgtcttct 360
ccattgctgg tcgtggcact gtcgtctctg gccgtgtcga gcgaggtatc ctgaagcgcg 420
atgctgaagt tcgactcgct ggcaagggca ccgccccat caagaccaag gttaccgata 480
tcgagacctt caagaagtcc tgcgaggagt ctgcgctggt tgacaactcc ggtctccttc 540

```

```
ttcgtggtgt caagcgtgat gaagtccgcc gtggtatggt cgtttccgtc cctggacagg 600
tcaaggcgca caagaagttc cttgtctcca tgtacgtgtt gagcaaggag gaagggtggc 660
gtcacactgg cttecggtgag aactacaggc cgcaaagtgt catccgcaact gccgacgagt 720
cgtgtgccct gtactggcca gaaggcacccg aggacgccca tgacaagctt gttatgcccc 780
gtgacaacgt cgagatgggt tgcgagctcc atgcaccaca cgtcttgagg cctgggtcaac 840
g
```

<210> 905
<211> 967
<212> DNA
<213> *Aspergillus niger* ATCC 9508

```
<400> 905
cgggtgctatc attgtcgtcg ccgcctccga cggtcagatg tacgttaacc ttaaaagaat 60
aactctcctt cagtatatat gcttacactg gcgatcaaca ggccccagac tcgtgagcac 120
ttgctgcttg ctcgtcaggt cgggtgtccag aagatcggtt tcttcgtcaa caaggctgat 180
gctatcgatg accccgagat gctggagctc gttgagctgg aaatgcgcga gcttctcagc 240
acctacggat tcgagggtga ggagaccccc atcgtcttcg gctctgctct ctgcgccatt 300
gaggaccgcc gccccgacat cggtaaccgag cgtatcgacg ctctcctcga ggccgttgac 360
acctggatcc ccaactcccca gcgtgacctt gacaagcctt tcttgatgtc cattgaggaa 420
gttttctcca tccccggctg tggtaaccgt gcctccggcc gtgtcgagcg tgggtctcctg 480
aagcgtgata gcgagggtga gatcatcggg accaccaacg aggtcatcaa gaccaagggt 540
accgacattg agaccttcaa gaagtcctgc tccgagtcct gcgccggtga caactccggt 600
ctcctgctcc gtgggtgtccg ccgtgaggat ctccgccgtg gtatggtcat tgccgctcct 660
ggcagcgcca aggccaaacag caagttcatg gtctccatgt acgtcctgac cgaggctgar 720
ggtggctgcc gtaccggttt cgggtgtccag taccgtcccc agctgttcat ccgcaactgcc 780
ggtaagtaaa attgcattct attccgctac tagggaacca tctctaattc tatttgctac 840
agatgaggct gctgagttca gcttccccga cggagaccag tcccgcctga tcatgcccgg 900
tgacaacgtc gagatgatcg tcaagaccca ccgccccgtc gccgccgagg ccggtcagcg 960
cttcaac
```

<210> 906
<211> 852
<212> DNA
<213> *Bipolaris hawaiiensis* ATCC 26067

```
<400> 906
tggtgctatt attgttgttg ccgcttccga cggtcaaagt ccccagactc gtgagcatct 60
gctgctcgcc cgtcaggtcg gtgttcagaa gatcgttgtc ttcgttaaca aggtcgacgc 120
tgtcgaggac aaggagatgt tggagcttgt cgagatggag atgcgcgaac tgctcagcag 180
ctatggcttc gaggggcgacg agacccctat catcatgggt tctgctctct gcgccattga 240
aggccgtcaa cccgacattg gtgtcgaaacg aattgacgag ctgctcgagg ctgttgatac 300
ttggattccc acccctcagc gtgagaccga aaagcctttc ctcatggccg tcgaggatgt 360
cttctccatt gctggctcgt gtaccgctgt ctctggccgt gtcgaacgag gtatcctgaa 420
gcgcgatgct gaagttgagc ttgtgggcaa gggcagcgca cccatcaaga ccaaggttac 480
cgatatcgag accttcaaga agtcttgcca ggagtcccgc gctggtgaca actccggtct 540
ccttcttcgt ggtgttaagc gtgatgaagt ccgcccgtgt atggctggtt ccgtccctgg 600
acagggttaag gcgcacaaga agttccttgt ctccatgtat gtgctgagca aggaggaagg 660
tggccgacac actggcttcg gtgagaacta caggccgcaa atgttcatcc gcaactgccga 720
cgagtcgtgt gccctgtact ggccagaagg caccgaggat gcccacgaca agcttgtcat 780
gcccgggtgac aacgtcgaga tggtttgcca gctccatgca ccacacgtct tggagactgg 840
tcagcgcttc aa
```

<210> 907
<211> 966
<212> DNA
<213> *Aspergillus flavus* ATCC 26947

```
<400> 907
ggtgctattg ttgtcggttg tgcttcggat ggtcatgatg tatggacagg ccctttgcta 60
ctgaatgggt tcaagatctc gcgcttacac gtattataat agggcccaga cccggggagca 120
cttgetgctt gcccgtcagg tcggtgtcca gaagatcgct gtttttgtca acaagattga 180
tgccgttgag gaccctgaga tgttggagct tgtcgagttg gaaatgcgcg agctccttag 240
```

cagctacggc ttcgagggcg aagagactcc catcatcttc ggttctgctc tgtgtgcttt 300
ggaggaccgt cgccccgaca ttggtgcccga gcgtatcgac gagctcatga aggccgttga 360
cacctggatc cctacccctc agcgtgatct tgacaagcct ttctcatgt ctgtcgagga 420
agtcttctcc atcgccggtc gtggtaccgt tgctccggc cgtgtcgaac gtggtatcct 480
gaagaaggac agcgaagtcg agatcatcgg aggtagcttc gatgctacca agaccaagg 540
caccgacatt gagaccttca agaagtcttg tgacgagtcc cgcgctggtg acaactctgg 600
cttgcttctc cgtggtatcc gtcgtgaaga cgtccgcccg ggaatgatca ttgctgctcc 660
tggcagcacc aaggcccacg accagttctt ggtgtccatg tacgttctca ctgaggctga 720
gggtggctgt cgtactggct tcggctccaa ctaccgcccc cagggtgttcg ttcgactgc 780
tggtaagtca agccttttgc tcaactaacg gtattgatta agttctaact gttgtatcct 840
agatgaggct gctgacctca gcttccccga cgggtgatgag tcccggaggg tgatgectgg 900
tgacaacgct gagatgggtcc tcaagactca ccgccccatt gctgctgagg ctggccagcg 960
cttcaa

<210> 908

<211> 845

<212> DNA

<213> *Alternaria alternata* ATCC 62099

<400> 908

ggtgctatca tcgtcgttgc tgcttccgat ggctcagatgc cccagacccg tgagcacttg 60
ctgctcgccc gtcaggtcgg tgctcagaag atcgttgtct tcgtcaacaa ggtcgtatgct 120
gtcgaagacc cggagatggt ggaactcgtc gagatggaga tgcgtgagtt actcaccagc 180
tacggcttcg agggcgacga gacacccatc atcatgggtt ccgctctatg cgccatcgag 240
ggccgcccagc ccgagatcgg tgttaccaag gtcgacgagc taatggacgc tgtcgactca 300
tggatccccca cccctcagcg tgagaccgag aagcctttcc tcatggctgt tgaggatgtc 360
ttctcgattg ctggacgtgg taccgtcgtt tcgggcccgtg tcgagcgcgg tatcttgaag 420
cgtgacgctg aagtcgagct tgctggcaag ggcaccgcgc caatcaagac caaggtcact 480
gatattgaga ccttcaagaa gtcgtgcgag gagtgcgcgc cgggtgataa ctccggtctt 540
ctcctccgtg gtgtcaagcg tgatgacgtt cgccgcggta tgggtgtttc cgttcccggg 600
caagtcaagg ctcaacaagaa gttccttgct tccatgtacg ttctaagcaa agaggagggt 660
ggctgctaca ccggcttcgg cgagaactac aggccgcaaa tgttcatccg aactgcccgt 720
gaatcctgcg cacttcactt cccagagggg accgaggatg cgcacgacaa gctagttatg 780
cccggtgaca acgtcgagat ggtctgcgaa ctccaccagc cccacgttct agagaccggt 840
cagcg

<210> 909

<211> 931

<212> DNA

<213> *Penicillium marneffe* ATCC 64101

<400> 909

cgctgttggt gtcgtcgtg cttctgatgg tcaaagttaa catatccacg agctgccaat 60
tatggacact gctgataaga ataggcccca aaccggtgag cacttgctcc tcgcccgtca 120
ggtcgggtgt caaaaagatcg tcgtcttcgt caacaagggt gatgccgtcg aggaccccga 180
gatgttgga cttgtcgaat tggaaatgcg tgaactcttg accacctacg gtttcgaggg 240
tgaagagacc cctatcattt tcggatccgc tctttgcgcc ttggaaggcc gcaagcccga 300
gattggcgaa cagaagattg acgagctcat gaacgccgtt gatacctgga tccccacccc 360
ccagcgtgac cttgacaagc ccttcttgat gtccgttgag gaagttttct ccattctctg 420
tcgtggtacc gttgcatctg gtcgtgttga gcgtggtatt ttgcgcaagg attctgaggt 480
tgagattatc ggataccaga agaaccctat caagaccaag gttaccgaca ttgagacctt 540
caagaagtct tgcgatgaat ctcggtgctg tgacaactct ggcttgcttc tccgtgggtat 600
caagcgtgag gacattcgtc gtggtatggg tatcgctgct cctggaacca ccaagggtca 660
tgacaacttc ttggtctcca tgtatgtctt gactgaggct gaaggtgggt gtcgtactgg 720
attcggcgcc aactaccgtc ctcaagcttt catccgtact gccggtatgt tccctttcaa 780
agtcaattaa tgagcgattt gctaacgagt tatagatgag gctgtactc tcagcttccc 840
cgggtgacgat cagtccaagc aggtcatgcc cggtgacaac gttgagatga tcttgaagac 900
acaccgtccc gttgcgcgcg aagctgggtca g

<210> 910

<211> 931

<212> DNA

<213> *Penicillium marneffe* ATCC 58950

```

<400> 910
cgctgttggt gtcgtcgctg cttctgatgg tcaaatgtaa catatccacg agctgccaat 60
tatggacact gctgataaga ataggcccca aaccctgag cacttgctcc tcgcccgtca 120
ggtcgggtgtt caaaagatcg tcgtcttcgt caacaagggt gatgccgtcg aggaccccga 180
gatgttgga cttgtcgaat tggaaatgcg tgaactcttg accacctacg gtttcgaggg 240
tgaagagacc cctatcattt tcggatccgc tctttgcgcc ttggaaggcc gcaagcccga 300
gattggcgaa cagaagattg acgagctcat gaacgccgtt gatacctgga tccccacccc 360
ccagcgtgac cttgacaagc ccttcttgat gtccgttgag gaagttttct ccattctctg 420
tcgtgggtacc gttgcatctg gtcgtgttga gcgtgggtatt ttgcgcaagg attctgaggt 480
tgagattatc ggataaccaga agaaccctat caagaccaag gttaccgaca ttgagacctt 540
caagaagtct tgcgatgaat ctctgtctgg tgacaactct ggcttgcttc tccgtgggtat 600
caagcgtgag gacattcgtc gtggtatggt tatcgtgctt cctggaacca ccaaggctca 660
tgacaacttc ttggtctcca tgtatgtctt gactgagggt gaagggtggtc gtcgtactgg 720
attcggcgcc aactaccgtc ctcaagcttt catccgtact gccggtatgt tccctttcaa 780
agtcaattaa tgagcgattt gctaacgagt tatagatgag gctgctactc tcagcttccc 840
cggtgacgat cagtccaagc aggtcatgcc cggtgacaac gttgagatga tcttgaagac 900
acaccgtccc gttgccgccc aagctggtca g 931

```

```

<210> 911
<211> 20
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

```

```

<400> 911
gacggmkkca tgccgcarac 20

```

```

<210> 912
<211> 20
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

```

```

<400> 912
gacggcgkca tgccgcarac 20

```

```

<210> 913
<211> 20
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

```

```

<400> 913
gacggsyca tgccckagac 20

```

```

<210> 914
<211> 21
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

```


<400> 914 21
gaaragctgc ggrcgrrtagt g

<210> 915
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 915 21
aaacgcctga ggrcggtagt t

<210> 916
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 916 20
gccgagctgg ccggcttcag

<210> 917
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 917 22
tcgtgctacc cgtygccgcc at

<210> 918
<211> 1391
<212> DNA
<213> Escherichia coli strain J01672

<400> 918
agagaagcct gtcggcaccg tctggtttgc ttttgccact gcccgcggtg aaggcattac 60
ccggcgggat gcttcagcgg cgaccgtgat gcggtgcgtc gtcaggctac tgcgtatgca 120
ttgcagacct tgtggcaaca atttctacaa aacacttgat actgtatgag catacagtat 180
aattgcttca acagaacata ttgactatcc ggtattaccc ggcatgacag gagtaaaaaat 240
ggctatcgac gaaaacaaac agaaagcgtt ggcggcagca ctggggccaga ttgagaaaca 300
atthtggtaaa ggctccatca tgcgcctggg tgaagaccgt tccatggatg tggaaaccat 360
ctctaccggg tcgctttcac tggatatcgc gcttggggca ggtggtctgc cgatgggccc 420
tategtcgaa atctacggac cggaatcttc cggtaaaacc acgctgacgc tgcagggtgat 480
cgccgcagcg cagcgtgaag gtaaaacctg tgcgtttatc gatgctgaac acgcgctgga 540
cccaatctac gcacgtaaac tgggcgtcga tatcgacaac ctgctgtgct cccagccgga 600
caccggcgag caggcactgg aaatctgtga cgccctggcg cgttctggcg cagtagacgt 660
tatcgctggt gactccgtgg cggcactgac gccgaaagcg gaaatcgaag gcgaaatcgg 720
cgactctcac atgggccttg cggcacgtat gatgagccag gcgatgcgta agctggcggg 780
taacctgaag cagtccaaca cgctgctgat cttcatcaac cagatccgta tgaaaattgg 840
tgtgatgttc ggtaaccggg aaaccactac cgggtggaac gcgctgaaat tctacgcctc 900
tgttcgtctc gacatccgtc gtatcggcgc ggtgaaagag ggcgaaaacg tgggtgggtag 960
cgaaacccgc gtgaaagtgg tgaagaacaa aatcgctgcg ccgttttaac aggctgaatt 1020

```
ccagatcctc tacggcgaag gtatcaactt ctacggcgaa ctgggttgacc tgggcgtaaa 1080
agagaagctg atcgagaaaag caggcgcggtg gtacagctac aaaggtgaga agatcgggtca 1140
gggtaaagcg aatgcgactg cctggctgaa agataacccg gaaaccgga aagagatcga 1200
gaagaaagta cgtgagttgc tgctgagcaa cccgaactca acgccggatt tctctgtaga 1260
tgatagcgaa ggcgtagcag aaactaacga agatttttaa tcgtcttggt tgatacacia 1320
gggtcgcatc tgcggccctt ttgctttttt aagttgtaag gatatgccat gacagaatca 1380
acatcccgtc g                                     1391
```

<210> 919

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (3)..(3)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (6)..(6)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (15)..(15)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (18)..(18)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base

<222> (6)..(6)

<223> i

<220>

<221> modified_base

<222> (12)..(12)

<223> i

<220>

<221> modified_base

<222> (15)..(15)

<223> i

<220>

<221> modified_base

<222> (18)..(18)

<223> i

<400> 919
gggccngart cntmnggnaa rac

23

<210> 920
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (20)..(20)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>

<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (20)..(20)
<223> i

<400> 920
tcnccvatnt cncntcnan ytc

23

<210> 921
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (2)..(2)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (2)..(2)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 921
tnyrtngayg cngarcangc

20

<210> 922
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<400> 922
taraayttna rngcnynkcc ncc

<210> 923
<211> 21
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (6)..(6)

<223> n represents a modified base

<220>

<221> modified_base

<222> (6)..(6)

<223> i

<400> 923

gacgcngcca tcctgatgat c

21

<210> 924

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 924

acctcagtcg tcacgttggc g

21

<210> 925

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 925

aagcagatgg ttgtgtgctg

20

<210> 926

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 926

cagctgctcg tggatcatct cgat

24

<210> 927

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

Oligonucleotide

<400> 927 19
acgcggagaa ggtgcgctt

<210> 928
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 928 22
ggtcggttctt cgagtcaccg ca

<210> 929
<211> 448
<212> DNA
<213> Bacteroides fragilis ATCC 25285

<400> 929
ttcagcatgc catttcaaaa caggccgaag ccgatatcgt gattatcgtt gcttgtgggg 60
agcgtgcaaa tgaagttgtg gaaatcttta ccgaatttcc ggaattgggtg gacccgcaca 120
cgggacgtaa gctgatggag cgtaccatta ttatcgcaaa tacatcgaac atgccggtag 180
cagcgcgtga agcttctgtg tatacggcca tgacgattgc cgaatactat cgtgccatgg 240
gattgaaagt cctgctgatg gcagactcca ctcccgttg ggcgaggca ttgctgaga 300
tgtcgaaccg tatggaggag ttgcccggac cggatgcatt cccgatggac ctgtcctcaa 360
tcatttctaa cttctatggc cgtgcaggct acgtgaaact gaataacggc gagagcgggt 420
ctattacctt tatcgggtaca gtatcacc 448

<210> 930
<211> 438
<212> DNA
<213> Bacteroides distasonis ATCC 8503

<400> 930
gctatctcta aacaagcggg agcggatatt gtgattatcg ccgcctgcgg tgagcgtgcg 60
aatgaggtcg tagaggtatt tacggagttc ccggaattgg tagaccgcga tacgggacgt 120
aaattgatgg aacgtacgat cattatcgcc aatacatcca acatgccggt agccgctcgt 180
gaggcatccg tatatacggc gatgaccatc gccgagtatt atcgcagcat gggtttgaag 240
gttctgttga tggccgactc tacttcccgc tgggcacagg ctttgcgtga gatgtccaac 300
cgtttgagg agttgccggg accggatgct ttcccgatgg acttgtccgc tatcgtggcg 360
aacttctacg ctcggtgcggg attcggttcat ttgaataaca acgctacagg ctccgtcact 420
ttcatcggtg cgggtatcg 438

<210> 931
<211> 453
<212> DNA
<213> Porphyromonas asaccharolytica ATCC 25260

<400> 931
cctccagcac gctatctcta agcaggcggg ggctgatatt gtcattatgg cagcctgcgg 60
tgagcgtgct aatgaggtgg tggagatctt tgccgagttc cctgagctcg aagaccaca 120
cacgggacgc aagctgatgg agcgtacgat catcatcgct aacacgagta acatgccagt 180
ggctgctcgt gaggcttcgg tctacaccgc tatgaccatc gctgagtact accgctcgt 240
gggtctcaaa gtactcctaa ttggtgactc gacctctcgc tgggcacagg cactgctgga 300
gatgtctaac cgtctagagg agctgcctgg accagatgca ttcccgatgg acttgtcggc 360
tatcgtggga aacttctacg ctcggtgccg cttcgtctat ctcaacaacg gtgagacagg 420
ttctgtaacc ttcatcggtg cggctctctcc agc 453

<210> 932
<211> 835
<212> DNA
<213> *Listeria monocytogenes* ATCC 15313

```
<400> 932
cggagctatc ttagtagtat ctgctgctga tggcccaatg ccacaaactc gtgaacatat 60
cttactttca cgtcaagttg gtgttccata catcgttgta ttcatgaaca aatgtgacat 120
ggttgacgat gaagaattac tagaattagt tgaaatggaa attcgtgac tattaactga 180
atatgaattc cctggcgatg acattcctgt aatcaaaggt tcagctctta aagcacttca 240
aggtgaagct gactgggaag ctaaaattga cgagttaatg gaagctgtag attcttacat 300
tccaactccw gaacgtgata ctgacaaaacc attcatgatg ccagttgagg atgtattctc 360
aatcaactggt cgtggaacag ttgcaactgg acgtgttgaa cgtggacaag ttaaagttgg 420
tgacgaagta gaagttatcg gtatcgaaga agaaagcaaa aaagtagtag taactggagt 480
agaaatgttc cgtaaattac tagactacgc tgaagctggc gacaacattg gcgcacttct 540
acgtggtggt gctcgtgaag atatccaacr tgggtcaagta ttagctaaac caggttcgat 600
tactccacac actaacttca aagctgaaac ttatgtttta actaaagaag aaggtggacg 660
tcacactcca ttcttcaaca actaccgccc acaattctat ttccgtacta ctgacgtaac 720
tggtattggt acacttccag aaggtactga aatggtaayg cctggtgata acattgagct 780
tgcagttgaa ctaattgcac caatcgctat cgaagacggg actaaattct ctatc 835
```

<210> 933
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (10)..(10)
<223> n represents a modified base

<220>
<221> modified_base
<222> (10)..(10)
<223> i

<400> 933
catcatcgtn ttcmtgaaca artg

24

<210> 934
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<400> 934
tcacgyttrr taccacgcag naga

24

<210> 935
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<400> 935
ggnaarwsnc arytnthyca yac

23

<210> 936
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (5)..(5)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (18)..(18)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base

<222> (5)..(5)

<223> i

<220>

<221> modified_base

<222> (9)..(9)

<223> i

<220>

<221> modified_base

<222> (12)..(12)

<223> i

<220>

<221> modified_base

<222> (18)..(18)

<223> i

<400> 936

tcnsnytcng gnarrcangg

20

<210> 937

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (3)..(3)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (6)..(6)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 937
atnacngarg ynttyggnga rtt

23

<210> 938
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
 <221> modified_base
 <222> (6)..(6)
 <223> i

<220>
 <221> modified_base
 <222> (9)..(9)
 <223> i

<220>
 <221> modified_base
 <222> (12)..(12)
 <223> i

<220>
 <221> modified_base
 <222> (18)..(18)
 <223> i

<400> 938
 cyngtngyns wngcrtgngc

20

<210> 939
 <211> 1203
 <212> DNA
 <213> *Saccharomyces cerevisiae*

<400> 939
 atgtctcaag ttcaagaaca acatatatca gagtcacagc ttcagtacgg gaacgggttcg 60
 ttgatgtcca ctgtaccagc agacctttca cagtcagtcg ttgatggaaa cggcaacggg 120
 agcagcgaag atattgaggg caccaacggc tccggcgatg gtggcggatt gcaggagcaa 180
 gcggaagcgc aaggtgaaat ggaggatgaa gcatacgatg aagctgcctt aggttcggtt 240
 gtgccaatag aaaaactgca agtgaacggg attactatgg cggatgtgaa aaaactaagg 300
 gagagtgggc ttcacactgc tgaagcggta gcatatgctc ccagaaaagga tttattggaa 360
 atcaaaggta tatcggaagc taaggcagat aagttgctaa acgaagcggc aaggctagt 420
 cctatgggat ttgtcacggc tgctgatttt catatgagaa gatcggagct gatttgtttg 480
 acaacggggt ctaagaattt ggacactctt ttgggtgggt gtgtggaaac tggttctatt 540
 actgagcttt tcgggtgaatt caggacaggt aagttcccagc tatgtcacac tttggccgtg 600
 acatgccaaa ttccattgga tattggtggc ggtgaaggta agtgtttgta tatcgatacc 660
 gaagggtactt tcaggccggg aagattggta tccatagctc agcgggttcgg attagaccg 720
 gatgatgctt tgaacaacgt tgcgtatgca agagcctata acgccgatca tcagttaaga 780
 cttctggatg ctgctgcccc aatgatgagc gagtctcggg tttccttgat tgtggctgat 840
 tctgttatgg ctctataccg tacggatttt tctggctcgtg gtgaactaag cgcaaggcaa 900
 atgcatttag ccaaatttat gcgtgctttg caaaggctgg ccgaccaatt tgggtgttgca 960
 gtcgtcgtaa ctaaccaagt ggtcgcccaa gttgatgggtg gtatggcttt taatccagat 1020
 ccaaagaagc ctatcggtgg taatattatg gcacattctt ccaccacggc attagggtttc 1080
 aaaaagggtg agggatgtca aagattatgc aaagtgtgtg actcaccttg cttaccagag 1140
 gctgaatgtg tgttcgcat ctatgaagat ggtgttggtg accccagaga agaagacgag 1200
 tag 1203

<210> 940
 <211> 1800
 <212> DNA
 <213> *Saccharomyces cerevisiae* strain GRF88

<400> 940
 cgatccaatt gctgggtctta agatgcattt gattgatcta ggtattgcca ctgaagctga 60
 agtcaaagct tacgacaagt ccgctagaaa atacgttgac gaacaagttg aattagctga 120
 tgctgtctct cctccagaag ccaaattatc catcttggtt gaagacgtct acgtgaaagg 180
 tacagaaact ccaaccctaa gaggtaggat ccctgaagat acttgggact tcaaaaagca 240
 aggtttttgcc tctaggggatt aattaaatcg taaggaaaaa taaaataata gtgctgtgat 300
 cgcgatgat tcttccctgg aagcgccatt ttatagcaag aaatgtaagt caagtatatt 360
 ttaactgtat atacaacaat atgactcttt tttatgcctt gttgtttttc ttcgggtttt 420

```

cccacacatt gtgtggagag atagttatta acagaccgaa aatagccgcc caaggataaa 480
cttttatata aaggggaagg tagttgaccc aaaaatttgg attctacttt ccagatttac 540
tttcaccctt ttatatattgc tgtagtctgt tatgccaatc aggaaagcat ttgaacaaat 600
atgtctgtta caggaactga gatcgatagt gatacagcaa aaaatattct tagtgtagat 660
gaattacaga actatggtat taatgcctca gatcttcaaa aattgaagtc tgggtgggata 720
tacacagtca atgtatgtta taataacatt tttaaaacct ctgctgtaga ggttctttcc 780
ccctttcttt tactaactaa taatttggaa aggaactttt atagaccgtt ttgtcaacaa 840
caagaagaca tctatgtaaa attaaagggt taagttaggt gaaagtggaa aaaattaaag 900
aagctgctgg aaaaatcata cagggtggat ttatccccgc tactgtacaa ttagatataa 960
gacagcgtgt gtactcctta tcaactggat ctaagcaact agattcaatc ctagggtggtg 1020
gaataatgac aatgagtatc actgaagtat ttggtgaatt taggtgtggt aagacacaga 1080
tgtctcatatc tttgtgtgtt accacgcagc tcaggcccgga gaggattaag caaattgcag 1200
aagtagcata tattgatata gaaggcactt tggcaaacgt ttcatatgct agagccttga 1260
aaggttatga attggatccc gagtcatgtt tggcaaacgt ttcatatgct agagccttga 1320
atagtgaaca tcaaattggaa cttgttgaac aattgggtga agaacttagt tctggagatt 1380
atcgcccttat cgtggtagat tctataatgg caaacttcag agtagactac tgcggtagag 1440
gtgaactaag cgaaagacag caaaagctat atcaacatct tttcaaattg aatagattgg 1500
cagaggaatt taatgttgca gtatttctga caaaccaagt tcaatcagac ccaggtgctt 1560
ctgcattatt tgcctcggca gatggttaga aaccaattgg agggcacgtt ctggcacatg 1620
cgtcagcaac aaggattttg ttgagaaaaa ggcgtggtga cgaaagagtt gccaaagttac 1680
aagattcccc agatatgcct gaaaaagaat gtgtctacgt aattgggtgaa aaaggtatta 1740
ccgattcaag tgactagtgt ttgtatactt ttttaataat gatgacattg ctcctttatt 1800
aaacttttct ttacttttgt gttactaata ttattaatat cttgttatga tttctttgtt

```

<210> 941
 <211> 430
 <212> DNA
 <213> *Cryptococcus humicolus* ATCC 38294

```

<400> 941
cgctccttacc caggagctca ttaacaacat tgccaaggcc cacgggtggtt tctccgtctt 60
caccggtgtc ggtgagcgta cccgtgaggg taacgacctg taccacgaga tgcgtgagac 120
tggtgtcatc aacctcgagg ggcactccaa ggctcgctctc gtcttcggcc agatgaacga 180
gccccccgga gcccggtgcc gtgtcgccct taccggcctc accatcgccg agtacttcg 240
tgacgaggag ggtcaggacg tgcttctctt catcgacaac attttccgtt tccccaggc 300
cggttccgag gtgtctgccc ttctcggtcg tatccctcgc gccgtcggtt accagccac 360
cctcgctacc gacatgggtt ccatgcagga gcgtatcacc accaccaaga aggggttcgat 420
tacctccgtc

```

<210> 942
 <211> 794
 <212> DNA
 <213> *Escherichia coli* ATCC 43895

```

<400> 942
cgtgtacgat gctcttgagg tgcaaaatgg taatgagcgt ctggtgctgg aagttcagca 60
gcagctcggc ggcgggtatcg tgcgtacct cgcaatgggt tcctccgacg gtctgcgtcg 120
cgggtctggat gtaaaagacc tcgaacaccc gatcgaagtc ccggtaggta aagcgactct 180
gggcccgtatc atgaacgtac tgggtgaacc ggtcgacatg aaaggcgaga tccggtgaaga 240
agagcgttgg gcgattcacc ggcgagcacc ttcctacgaa gagctgtcaa actctcagga 300
actgctggaa accggtatca aagttatcga cctgatgtgt cggttcgcta agggcggtta 360
agttgggtctg ttcgggtggtg cgggtgtagg taaaaccgta aacatgatgg agctcattcg 420
taacatcgcg atcgagcact ccggttactc tgtgtttgcg ggcgtagggtg aacgtactcg 480
tgaggggaac gacttctacc acgaaatgac cgactccaac gttatcgata aagtatccct 540
ggtgtatggc cagatgaacg agccgccggg aaaccgtctg cgcgtagctc tgaccgggtc 600
gacctgggt gagaaattcc gtgacgaagg tcgtgacgtt ctgctgttcg ttgacaacat 660
ctatcgttac accctggccg gtacggaagt atccgcactg ctgggccgta tgccttcagc 720
gttaggttat cagccgacc tggcggaaga gatgggcgtt ctgcaggaac gtatcacctc 780
caccaaaacc ggtt

```

<210> 943
 <211> 814
 <212> DNA

<213> Escherichia coli ATCC 35401

```

<400> 943
atgccgtacc ggcgctgtac gatgctcttg aggtgcaaaa tggtaatgag cgtctggtgc 60
tggaagttca gcagcagctc ggccggcggt tctgtacgtac catcgcaatg ggttcctccg 120
acggctctgcg tcgcggtctg gatgtaaaag acctcgaaca cccgattgaa gtcccggtag 180
gtaaagcgac tctggggcgt atcatgaacg tactgggtga accggtcgac atgaaaggcg 240
agatcgggtga agaagagcgt tgggcgattc accgcgcagc accttcctac gaagagctgt 300
caaactctca ggaactgctg gaaaccggta tcaaagttat cgacctgatg tgtccgttcg 360
ctaagggcgg taaagttggt ctgttcgggt gtgcgggtgt aggtaaaacc gtaaaccatga 420
tggagctcat tcgtaacatc gcgatcgagc actccgggtt ctctgtgttt gcgggcgtag 480
gtgaacgtac tcgtgagggg aacgacttct accacgaaat gaccgactcc aacgttatcg 540
acaaagtatc cctgggtgat ggccagatga acgagccgcc gggaaaccgt ctgcgcgttg 600
ctctgaccgg tctgaccatg gctgagaaat tccgtgacga aggtcgtgac gttctgctgt 660
tcgttgacaa catctatcgt tacaccctgg ccggtacgga agtatccgca ctgctgggccc 720
gtatgccttc agcggtaggt tatcagccga cctggcgga agagatgggc gttctgcagg 780
aacgtatcac ctccaccaa actggttcta tcac 814

```

<210> 944

<211> 798

<212> DNA

<213> Escherichia coli ATCC 11775

```

<400> 944
gtgtacgatg ctcttgaggt gcaaaatggt aatgagcgtc tgggtgctgga agttcagcag 60
cagctcggcg gcggtatcgt gcgtaccatc gcaatgggtt cctccgacgg tctgcgtcgc 120
ggctctggatg taaaagacct cgaacacccg atcgaagtcc cggtaggtaa agcgactctg 180
ggccgtatca tgaacgtact ggggtgaaccg gtcgacatga aaggcgagat cggngaagaa 240
gagcgtttgg cgattcaccc gcgagcacct tcctacgaag agctgtcaaa ctctcaggaa 300
ctgctgaaaa ccggtatcaa agttatcgac ctgatgtgtc cgttcgctaa gggcggtaaa 360
gttgggtctgt tcggtgggtgc ggggtgtaggt aaaaccgtaa acatgatgga gcttattcgt 420
aacatcgcg tgcgagcactc cggttactct gtgtttgcgg gcgtagggtga acgtactcgt 480
gagggtaacg acttctacca cgaaatgacc gactccaacg ttatcgacaa agtatccctg 540
gtgtatggcc agatgaacga gccgcgggga aaccgtctgc gcgttgctct gaccgggtctg 600
accatggctg agaaattccg tgacgaaggc cgtgacgttc tgctgttcgt tgacaacatc 660
tatcgttaca ccctggccgg tacggaagta tccgcactgc tgggcccgtat gccttcagcg 720
gtaggttatc agccgaccct ggcggaagag atgggcgttc tgcaggaacg tatcacctcc 780
accaaaccg gttctatc

```

<210> 945

<211> 812

<212> DNA

<213> Escherichia coli ATCC 25922

```

<400> 945
atgccgtacc ggcgctgtac gatgctcttg aggtgcaaaa tggtaatgag cgtctggtgc 60
tggaagttca gcagcagctc ggccggcggt tctgtcgtac catcgcaatg ggttcctccg 120
acggctctgcg tcgcggtctg gatgtaaaag acctcgaaca cccgatcgaa gtcccggtag 180
gtaaagcgac tctggggcgt atcatgaacg tactgggtga accggtcgac atgaaaggcg 240
agatcgggtga agaagagcgt tgggcgattc accgcgcagc accttcctac gaagagctgt 300
caaactctca ggaactgctg gaaaccggta tcaaagttat cgacctgatg tgtccgttcg 360
ctaagggcgg taaagttggt ctgttcgggt gtgcgggtgt aggtaaaacc gtaaaccatga 420
tggagcttat tcgtaacatc gcgatcgagc actccgggtt ctctgtgttt gcgggcgtag 480
gtgaacgtac tcgtgagggg aacgacttct accacgaaat gaccgactcc aacgttatcg 540
acaaagtatc cttgggtgat ggccagatga acgagccgcc gggaaaccgt ctgcgcgttg 600
ctctgaccgg tctgaccatg gctgagaaat tccgtgacga aggtcgtgac gtattgctgt 660
tcgtcgataa catctatcgt tacaccctgg ccggtaccga agtatccgca ctgctgggccc 720
gtatgccttc agcggtaggt tatcagccga cctggcgga agagatgggc gttctgcagg 780
aacgtatcac ctccaccaa accggttcta tc 812

```

<210> 946

<211> 832

<212> DNA

<213> *Neisseria polysaccharea* ATCC 43768

<400> 946
gcgacgctat cccgcatgtt tacgatgccc tgaaattgga cgagaacggt ctgactctgg 60
aagttcaaca acttctgggt gacggcggtt tccgtactat tgcaatgggt agttcagacg 120
gcctgaaacg cggcatgtct gtaagcaata ctgggtgcgc aatcactgtg ccggtaggta 180
aaggctacttt gggctcgatt gtcgacgtat tgggtacgcc tgttgatgaa gcaggtccga 240
tcgataccga caagagccgt gccattcacc aaactgctcc gaaattcgac gagttgtctg 300
caactaccga attgttgga accggtatta aagtgatcga cttgctgtgt ccggttgcta 360
aaggcggttaa agtaggtctg ttcggtgggt cgggtgtagg caaaaccgtg aacatgatgg 420
aattgatcaa caacatcgcc aaagcgcaca gcggtctgtc cgtgttcgca ggtgtggcg 480
agcgtacccg tgaaggtaac gacttctacc acgagatgaa agattccaac gtattggata 540
aagtggcaat gggttacggg cagatgaacg aacctccggg caaccgtttg cgcgtcgc 600
tgaccgggtt gaccatggcg gaatacttcc gtgacgaaaa agacgaaaaa ggtaaagggt 660
gcgacgtatt gttcttcgtt gacaacatct accgttacac tctggccggg accgaagtat 720
ctgcactgtt gggccgtatg ccttctgcag tgggttacca accgacattg gctgaagaaa 780
tgggtcggtt gcaagagcgt attacctcta cccaaaccgg ttccattact tc 832

<210> 947

<211> 840

<212> DNA

<213> *Neisseria sicca* ATCC 9913

<400> 947
tccgcgcgat gccattccgc atgtttacga cgccctgaaa ttggatgcaa acggcctgac 60
tttggaaagta caacagcttc tgggcgacgg cgtgggttcgt actattgcaa tgggtagttc 120
ggacggctctg aaacgcggca tgactgtgaag caatacagat gcgccgatta ctgtgccggt 180
aggtaaagggt actttgggac gtattgtcga tgtgttgggt acacctgttg atgaagcagg 240
tccgattgat accgacaaa accgtgctat ccacagaca gctccgaaat tcgatgagtt 300
gtctgtact accgagctgc tggaaaacagg cattaaagtg attgacttgc tgtgtccgtt 360
tgccaaaggc ggtaaagtag gtctgttcgg tgggtgccgt gtaggcaaaa ccgtcaacat 420
gatggaattg attacaaca tcgccaaagc gcatagtggg ttgtccgtgt tcgccggtgt 480
gggggaacgt acccgtgaag gtaacgactt ctaccacgag atgaaagatt ccaacgtatt 540
ggacaaagtg gcgatgggtt acgggtcagat gaacgaacct cggggaacc gtctgcgtgt 600
agccttgacc gggttgacga tggccgaata cttccgtgat gaaaaagacg aaagcggcaa 660
aggtcgcgac gtattgttct tcgtggacaa catttaccgt tacactctgg ccggtacaga 720
agtatccgca ttgctcgggt gtatgccttc agcagtaggt taccaaccga cattggctga 780
agaaatgggt cgctcgcaag agcgtattac cctctactca aacaggctcc attacttcta 840

<210> 948

<211> 843

<212> DNA

<213> *Streptococcus mitis* ATCC 903

<400> 948
gcagctggcg acaagctacc tgagatcaat aatgcacttg tagtctataa aaatgacgaa 60
aaaaaatcaa aaatcgctct tgaagtagct cttgagcttg gtgatggagt ggttcggacc 120
atcgctatgg aatcaacgga tgggttgact cgtggcatgg aagtgtctaga tactggccgt 180
ccaatttctg tgccagtcgg caaagaaaca cttgggtcgc tctttaacgt tttgggagat 240
accattgact tggatgtctc ttttgccgat gatgcagagc gccagccaat ccataagaaa 300
gtctcaacct ttgatagtt gtctacttct tcagagatct tagagacagg tatcaagggt 360
atcgacctgt tagcccctta tctgaaagggt ggtaaagtgt gactcttcgg tgggtccgga 420
gttggttaaga ccgtctctgat tcaagaattg atccacaaca ttgcccaaga acacggtggt 480
atctctgtat ttactggcgt tggggaacgt acccgtgaag ggaatgacct ttattgggaa 540
ccaggagcgc gtatgcgggt tgctttgact ggtttgacga ttgcagaata cttccgtgat 600
gtggaagggt aagatgtctt gctcttcatt gacaacatct tccgtttcac gcaggcagg 720
tctgaagttt ctgccctttt gggtcggatg ccgtcagccg ttggttacca accaacactt 780
gcgacagaaa tggggcaatt gcaagagcgt atcacatcga ctaagaaggg ttctgttaacc 840
tct

<210> 949

<211> 841

<212> DNA

<213> Streptococcus mitis ATCC 49456

<400> 949

```
gcagcagggg aaaaacttcc tgagattaac aatgcacttg tcgtctacaa aaatgacgaa 60
agaaaaacaa aaatcgtcct tgaagtagcc ttggagttgg gagatggtat ggtccgtact 120
atcgccatgg aatcaacaga tggtttgact cgtggaatgg aagtattgga cacaggctcg 180
ccaatctctg taccagtagg taaagaaact ttgggacgtg tcttcaatgt tttgggagat 240
accattgact tggaagctcc ttttacagaa gatgcagagc gtcagccaat tcataaaaaa 300
gctccaactt ttgatgaatt gtctacctct tctgaaatcc ttgaaacagg gattaagggt 360
atcgaccttc ttgcccctta ccttaaagggt ggtaagggtg gacttttcgg tgggtgccgga 420
gttggtaaaa ccgtcttaat ccaagaattg attcacaaca ttgccaaga acacggtggt 480
atcttcagtat ttaccggtgt tggggaacgt actcgtgagg gtaatgacct ttactgggaa 540
atgaaagaat cagggtgttat cgagaaaaca gccatgggtat ttggtcagat gaatgagccg 600
ccaggagcac gtatgcgtgt tgccctaact gggttgacaa tcgccgaata cttccgtgat 660
gtggaaggcc aagacgtgct tctctttatc gataatatct tccgtttcac tcaggctggt 720
tcagaagtat ctgccctttt gggtcgtagt ccatcagccg ttggttacca accaactt 780
gtacacggaaa tgggtcaatt gcaagagcgt attacatcaa ctaaaaagggt ttctgtaacc 840
t
```

<210> 950

<211> 827

<212> DNA

<213> Streptococcus mitis strain LSPQ 2583

<400> 950

```
gctacctgag atcaataatg cacttgtagt ctataaaaat gacgaaaata aatcaaaaat 60
cgctccttgaa gtagctcttg agcttggtga tggagtgggt cggaccatcg ctatggaatc 120
aacggatggg ttgactcgtg gcatggaagt gctagatact ggctcgccaa tttctgtgcc 180
agtccgcaaa gaaacacttg gtcgcgtctt taacgttttg ggagatacca ttgacttgga 240
tgctcctttt gcggatgatg cagagcgcca gccaatccat aagaaagctc caacctttga 300
tgagttgtct acttcatcag agatcttaga gacagggtatc aaggttatcg acctgttagc 360
accttatctg aaaggtggta aagtcggact cttcgggtggt gccggagttg gtaagaccgt 420
cctgattcag gaattgatcc acaacattgc ccaagagcat ggtgggtatt ccgtgtttac 480
cgggtgttggg gaacgtaccc gtgaagggaa tgacctttac tgggaaatga aggagtctgg 540
cggtatcgag aaaacagcca tgggtcttcgg tcagatgaat gagccaccag gagcgcgat 600
gcgggttgct ttgactgggt tgacgattgc agagtacttc cgtgatgtag aagggtcaaga 660
tgtcttgctc ttcattgaca acatcttccg tttcacgcag gcaggttctg aagtctctgc 720
ccttttgggt cggatgccat cagccgttgg ttaccaacca acacttgcca ctgaaatggg 780
acaactccaa gagcgtatta catcgactaa gaaaggttct gtaactt 827
```

<210> 951

<211> 844

<212> DNA

<213> Streptococcus oralis ATCC 35037

<400> 951

```
gcagcagggg aaacacttcc tgagattaat aatgcacttg tcgtctacaa aaatgacgaa 60
agaaaaacaa aaatcgtcct tgaagtagcc ttggagttgg gtgatggtat ggtccgtacg 120
atcgccatgg aatcaacaga tggtttgact cgtggaatgg aagttttgga cacaggccgt 180
ccaatctctg taccagtagg taaagaaact ttgggacgtg tcttcaacgt tttgggagat 240
actattgact tggatgctcc tttcgctgaa gacgctgagc gtcagccaat tcataagaaa 300
gctccaactt ttgatgaatt gtctacctca tctgaaatct tggaaacagg gattaagggt 360
atcgaccttc ttgcccctta ccttaaagggt gggaaagttg gactcttcgg tgggtgccgga 420
gttggtaaaa ctgtcttgat ccaagagttg attcacaaca acccgtgagg ggaacgacct ttactgggaa 540
atcttcagtat ttaccggtgt tggagaacgt acccgtgagg ggaacgacct ttactgggaa 540
atgaaagaat caggcggttat cgagaaaaca gccatgggtat ttggtcagat gaatgagcca 600
cctggagcac gtatgcgtgt tgctcttact gggttgacaa tcgccgaata cttccgtgat 660
gtagaaggcc aagatgtgct tctctttatc gacaatatct tccgtttcac tcaagctggt 720
tcagaagtat ctgccctttt gggtcggatg ccttcagccg ttggttacca accaactt 780
gctacggaaa tgggtcaatt gcaagaacgt atcacatcaa ctaagaagggt ttctgtaacc 840
tcta
```


<210> 952
<211> 830
<212> DNA
<213> Streptococcus pneumoniae strain StrR-06

```

<400> 952
gcagcagggg aaaaacttcc tgagattaac aatgcacttg tcgtctacaa aaatgacgaa 60
agaaaaacaa aaatcgctcc tgaagtagcc ttggagttag gagatgggat ggttcgtact 120
atcgccatgg aatcaacaga tgggttgact cgtggaatgg aagtattgga cacaggctcg 180
ccaatctctg taccagtagg taaagaaact ttgggacgtg tcttcaacgt tttgggagat 240
accattgatt tggaagctcc ttttacagaa gacgcagagc gtcagccaat tcataaaaaa 300
gctccaactt ttgatgagtt gtctacctct tctgaaatcc ttgaaacagg gatcaagggt 360
attgaccttc ttgcccctta ccttaaagggt ggtaaagttg gacttttcgg ttggtgccgga 420
gttggtaaaa ccgtcttaat ccaagaattg attcacaaca ttgcccaaga gcacggtggg 480
atttcagtat ttactgggtg tggggaacgt actcgtgagg ggaatgacct ttactgggaa 540
atgaaagaat caggcggtat cgagaaaaca gccatgggtc ttggtcagat gaatgagcca 600
ccaggagcac gtatgctgtg tgcccttact gggttgacaa tcgctgaata cttccgtgat 660
gtggaaggcc aagacgtgct tctctttatc gataatatct tccgtttcac tcaggctggg 720
tcagaagtat ctgccctttt gggtcgtatg ccatcagccg ttggttacca accaacactt 780
gctacggaaa tgggtcaatt gcaagaacgt atcacatcaa ccaagaaggg 830

```

<210> 953
<211> 823
<212> DNA
<213> Streptococcus pneumoniae strain StrR-11

```

<400> 953
aaaaacttcc tgagattaac aatgcacttg tcgtctacaa aaatgacgaa agaaaaacaa 60
aaatcgctcc tgaagtagcc ttggagttag gagatgggat ggttcgtact atcgccatgg 120
aatcaacaga tgggttgact cgtggaatgg aagtattgga cacaggctcg ccaatctctg 180
taccagtagg taaagaaact ttgggacgtg tcttcaacgt tttgggagat accattgatt 240
tggaagctcc ttttacagaa gacgcagagc gtcagccaat tcataaaaaa gctccaactt 300
ttgatgagtt gtctacctct tctgaaatcc ttgaaacagg gatcaagggt attgaccttc 360
ttgcccctta ccttaaagggt ggtaaagttg gacttttcgg ttggtgccgga gttggtaaaa 420
ccgtcttaat ccaagaattg attcacaaca ttgcccaaga gcacggtggg atttcagtat 480
ttactgggtg tggggaacgt actcgtgagg ggaatgacct ttactgggaa atgaaagaat 540
caggcggtat cgagaaaaca gccatgggtc ttggtcagat gaatgagcca ccaggagcac 600
gtatgctgtg tgcccttact gggttgacaa tcgctgaata cttccgtgat gtggaaggcc 660
aagacgtgct tctctttatc gataatatct tccgtttcac tcaggctggg tcagaagtat 720
ctgccctttt gggtcgtatg ccatcagccg ttggttacca accaacactt gctacggaaa 780
tgggtcaatt gcaagaacgt atcacatcaa ctaagaaggg ttc 823

```

<210> 954
<211> 844
<212> DNA
<213> Streptococcus pneumoniae strain StrR-55

```

<400> 954
gcagcagggg aaaaacttcc tgagattaac aatgcacttg tcgtctacaa aaatgacgaa 60
agaaaaacaa aaatcgctcc tgaagtagcc ttggagttag gagatgggat ggttcgtact 120
atcgccatgg aatcaacaga tgggttgact cgtggaatgg aagtattgga cacaggctcg 180
ccaatctctg taccagtagg taaagaaact ttgggacgtg tcttcaacgt tttgggagat 240
accattgact tggaagctcc ttttacagaa gacgcagagc gtcagccaat tcataaaaaa 300
gctccaactt ttgatgagtt gtctacctct tctgaaatcc ttgaaacagg gatcaagggt 360
attgaccttc ttgcccctta ccttaaagggt ggtaaagttg gacttttcgg ttggtgccgga 420
gttggtaaaa ctgtcttaat ccaagaattg attcacaaca ttgcccaaga gcacggtggg 480
atttcagtat ttgctgggtg tggggaacgt actcgtgagg ggaatgacct ttactgggaa 540
atgaaagaat caggcggtat cgagaaaaca gccatgggtc ttggtcagat gaatgagcca 600
ccaggagcac gtatgctgtg tgcccttact gggttgacaa tcgctgaata cttccgtgat 660
gtggaaggcc aagacgtgct tctctttatc gataatatct tccgtttcac tcaggctggg 720
tcagaagtat ctgccctttt gggtcgtatg ccatcagccg ttggttacca accaacactt 780
gctacggaaa tgggtcaatt gcaagaacgt atcacatcaa ccaagaaggg ttctgtaacc 844
tcta

```

<210> 955
<211> 834
<212> DNA
<213> *Streptococcus pneumoniae* strain StrR-05

```
<400> 955
aaaaacttcc tgagattaac aatgcacttg tcgtctacaa aaatgacgaa agaaaaacaa 60
aaatcgtcct tgaagtagcc ttggagtttag gagatggtat gggttcgtact atcgccatgg 120
aatcaacaga tgggttgact cgtggaatgg aagtattgga cacagggtcgt ccaatctctg 180
taccagtagg taaagaaact ttgggacgtg tcttcaacgt tttgggagat accattgatt 240
tggaagctcc ttttacagaa gacgcagagc gtcagccaat tcataaaaaa gctccaactt 300
ttgatgagtt gtctacctct tctgaaatcc ttgaaacagg gatcaagggt attgaccttc 360
ttgcccccta ccttaaagggt ggtaaagggt gacttttcgg tgggtgccgga gttggtaaaa 420
ccgtcttaat ccaagaattg attcacaaca ttgcccaaga gcacgggtggg atttcagtat 480
ttactgggtg tggggaacgt actcgtgagg ggaatgacct ttactgggaa atgaaagaat 540
caggcggttat cgagaaaaca gccatgggtct ttggtcagat gaatgagcca ccaggagcac 600
gtatgcgtgt tgcccttact gggtttgacaa tcgctgaata cttccgtgat gtggaaggcc 660
aagacgtgct tctctttatc gataatatct tccgtttcac tcaggctggt tcagaagtat 720
ctgccctttt gggtcgtatg ccatcagccg ttggttacca accaacactt gctacggaaa 780
tgggtcaatt gcaagaacgt atcacatcaa ccaagaaggg ttctgtaacc tcta 834
```

<210> 956
<211> 495
<212> DNA
<213> *Babesia microtti* strain Persing-1

```
<400> 956
ttgtatatca caggcactca gcaaatatct cgatactgac gtaattatat acgtggggtg 60
tgggtgaacgt gggaatgaaa tggctgagat tctatgcgaa ttccctgaac tatctactgt 120
agttaatgat gaaaagggtg ccattatgga acgtacatgc ttagttgcca atacttctaa 180
tatgccagtg gccgctagag aagctagtat atacactggt attacaattg ctgaatattt 240
ccgtgatatg gggttacaact gcactcttat ggccgattcc actagccgat gggcagaggc 300
tctaagggaa atttctggtg gattggctga aatgcctgca gattctggct atccggccta 360
tttatcgta aggttgtcag ctttttatga acgtgcagggt gggataactg tctaattaat 420
ttaggcttga ttaagtgtt aggttcacca acacgaaccg gatctattac ggttgttaga 480
cgagtttctc cacca 495
```

<210> 957
<211> 469
<212> DNA
<213> *Entamoeba histolytica* strain HM1-1MSS

```
<400> 957
agttatttca caagcattaa gtaaatatag taattcagat gttattattt atgtaggatg 60
tgggtgaacga ggaaatgaaa tggcagaagt tcttcgagat tttccagctc tttctattaa 120
agtaggagat aaagaagaat ctattatgac aagaacagca cttggttgcta atacatctaa 180
tatgcctgtt gcagcacgtg aagcatcaat ttatactgga attacattat cagaatatta 240
tagagatatg ggatataatg ttgctatgat ggcagattca acatcaagat gggctgaagc 300
acttagagaa atttcaggac gtcttgcaga aatgccagct gattctggat atccagcata 360
tcttgcagca cgttttagcat cattttatga acgtgcagggt atggttgaat gtttaggatc 420
acaaaaaga atagggtcag tttctattgt aggagctgtt tcaccacct 469
```

<210> 958
<211> 452
<212> DNA
<213> *Fusobacterium nucleatum* subsp. *polymorphum* ATCC 10953

```
<400> 958
tacaacacca acttgctaaa tgggcagatg cagaagtagt tgtttatggt ggttgtgggg 60
aacgtggaaa tgaaatgacc gatgtactta tggaattccc agaaattatt gaccctaaga 120
caggacaatc tttaatgaag agaacagttc ttatagctaa tacttctaata atgccagttg 180
ctgctcgtga ggcttcaatc tatactggta taactattgc agaataattt agagatatgg 240
gatattcagt ggcacttatg gcgattcaa caagtcgttg ggcagaagca cttcgtgaaa 300
```

tgtcaggacg tttggaagaa atgccagggtg atgaaggata tccagcatat ctatcaagta 360
 gaatagcaga gttttatgaa agagcagggc ttgttgaaatg tctaggtaat ggagaagaag 420
 gagcattaac tgtaattgga gcagtatctc ca 452

<210> 959
 <211> 469
 <212> DNA
 <213> *Leishmania aethiopica* ATCC 50119

<400> 959
 tgtaattagt caggccctct ccaagtactc caactccgac tgcgtcatct atgtcggctg 60
 cggcgagcgc ggtaatgaga tggccgaggt gctcatggag ttcccgaacc tgacgaccgt 120
 gatcaatggt cgcgaggagt cgatcatgaa gcgcacctgc ctcgtggcga acacttcgaa 180
 catgccagtc gcagcccgtg aggcctctat ttacaccggc atcaccctgg ccgagtacta 240
 ccgtgatatg ggcaagcata tcgccatgat ggccgactcg acgtctcgct gggccgaggc 300
 gcttcgtgag atttcgggtc gtctggcgga gatgccggcc gatggtggct accctgccta 360
 tctcagcgct cgtctcgct ctttctacga gcgcgccggc ctcgtcacct gcacgcggcg 420
 gccgaagcgc cagggtctccg tcacgattgt cgggtgccgtg tctccgccg 469

<210> 960
 <211> 469
 <212> DNA
 <213> *Leishmania tropica* ATCC 30815

<400> 960
 tgtaattagt caggccctct ccaagtactc caactccgac tgcgtcatct atgtcggctg 60
 cggcgagcgc ggtaatgaga tggccgaggt gctcatggag ttcccgaacc tgacgaccgt 120
 gatcgatggt cgcgaggagt cgatcatgaa gcgcacctgc ctcgtggcga acacttcgaa 180
 catgccagtc gcagcccgtg aggcctctat ttacaccggc atcaccctgg ccgagtacta 240
 ccgtgatatg ggcaagcata tcgccatgat ggccgactcg acgtctcgct gggccgaggc 300
 gcttcgtgag atttcgggtc gtttggcgga gatgccggcc gatggtggct accctgccta 360
 tctcagcgct cgtctcgct ctttctacga gcgcgccggc ctcgtcacct gcacgcggcg 420
 gccgaagcgc cagggtctccg tcacgattgt cgggtgccgtg tctccgccg 469

<210> 961
 <211> 469
 <212> DNA
 <213> *Leishmania guyanensis* ATCC 50126

<400> 961
 tgtcatcagt caggccctct ccaagtactc caactccgac tgcgtcatct atgtcggctg 60
 cggtgaaacgc ggtaacgaga tggccgaggt gctcatggag ttcccgaacc tgacgactgt 120
 gatcgatggt cgcgaagagt ccatcatgaa gcgcacctgc ctcgtggcga acacttcgaa 180
 catgcccgct gcagcccgtg aggcctctat ttataccggc atcacccttg ctgagtacta 240
 ccgtgatatg ggcaagcaca ttgccatgat ggccgactcg acgtctcgct gggccgaggc 300
 gctgcgtgag atttcgggtc gattggcgga gatgccggct gatggtggct accctgccta 360
 cctcagcgcc cgccctcgct ctttctacga gcgcgccggc ctcgtcacct gcacgcggcg 420
 gccgaagcgc cagggtctccg tcacgatcgt cgggtgcagt tctccaccg 469

<210> 962
 <211> 469
 <212> DNA
 <213> *Leishmania donovani* ATCC 50212

<400> 962
 tgtcattagt caggccctct ccaagtactc caactccgat tgcgtcatct atgtcggctg 60
 cggcgagcgc ggtaatgaga tggccgaggt gctcatggag ttcccgaacc tgacgaccgt 120
 gatcgatggc cgcgaggagt cgatcatgaa gcgcacctgc ctcgtggcga acacttcgaa 180
 catgccagtc gcagcccgtg aggcctctat ttacaccggc atcaccctgg ccgagtacta 240
 ccgtgatatg ggcaagcata tcgccatgat ggctgactcg acgtctcgct gggccgaggc 300
 gcttcgtgag atttcgggtc gtctggcgga gatgccggcc gatggtggct accctgccta 360
 cctcagcgct cgtctcgct ctttctacga gcgcgccggc ctcgtcacct gcacgcggcg 420

gccgaagcgc cagggctccg tcacgatcgt cgggtgccgtg tctccaccg

<210> 963
<211> 469
<212> DNA
<213> Leishmania hertigi ATCC 50125

<400> 963									
tgtgatcagt	caggcccttt	ccaagtactc	caactcggac	tgcgtcatct	acgtcggctg	60			
tggtgagcgc	gggaacgaga	tggccgaggt	gctcatggat	ttcccgaactt	tgacgactgt	120			
gatcgatggt	cgcgaggagt	ccatcatgaa	gcgcacctgc	ctcgtggcga	acacctccaa	180			
catgccagtt	gcagcccgtg	aggcttctat	ctataccggc	atcacactgg	ctgagtacta	240			
tcgtgatatg	ggcaagcaca	ttgccatgat	ggccgactcg	acgtctcgct	gggcccaggc	300			
gttgcgtag	atttcgggtc	ggctggcgga	gatgccggcc	gatgggtggt	accccgccta	360			
cctcagtgcc	cgtctcgct	ccttctacga	gcgcgctggc	ctcgtgacct	gtatcggcgg	420			
gccgaagcgc	cagggctccg	tcacaattgt	tggtgcggtg	tctccaccg		469			

<210> 964
<211> 469
<212> DNA
<213> Leishmania mexicana ATCC 50156

<400> 964									
ggtcattagt	caggcccttt	ccaagtactc	caactctgac	tgcgtcatct	acgtcggctg	60			
cggcgagcgc	ggtaatgaga	tggccgaggt	gctcatggag	ttcccgaacc	tgacgacct	120			
gatcgatggt	cgggaggagt	cgatcatgaa	gcgcacctgc	ctcgtggcga	acacctcgaa	180			
catgcccgct	gcagcccgtg	aggcctctat	ctacaccggc	atcacacctg	ccgagtacta	240			
ccgtgatatg	ggcaagcaca	tcgccatgat	ggccgactcg	acgtctcgct	gggctgaggc	300			
gcttcgtgag	atttcgggtc	gtctggcgga	gatgccggcc	gatgggtggt	accccgccta	360			
cctcagcgct	cgtctcgct	ccttctacga	gcgcgccggc	ctcgtcacct	gcatcggcgg	420			
gccgaagcgc	cagggctccg	tcacgatcgt	cgggtgccgtg	tctccgcgc		469			

<210> 965
<211> 469
<212> DNA
<213> Leishmania tropica ATCC 50129

<400> 965									
tgtaattagt	caggccctct	ccaagtactc	caactccgac	tgcgtcatct	atgtcggctg	60			
cggcgagcgc	ggtaatgaga	tggccgaggt	gctcatggag	ttcccgaacc	tgacgacct	120			
gatcgatggt	cgcgaggagt	cgatcatgaa	gcgcacctgc	ctcgtggcga	acacttcgaa	180			
catgccagtc	gcagcccgtg	aggcctctat	ttacaccggc	atcacacctg	ccgagtacta	240			
ccgtgatatg	ggcaagcaca	tcgccatgat	ggccgactcg	acgtctcgct	gggcccaggc	300			
gcttcgtgag	atttcgggtc	gtttggcgga	gatgccggcc	gatgggtggt	acccctgccta	360			
tctcagcgct	cgtctcgct	ccttctacga	gcgcgccggc	ctcgtcacct	gcatcggcgg	420			
gccgaagcgc	cagggctccg	tcacgattgt	cgggtgccgtg	tctccgcgc		469			

<210> 966
<211> 449
<212> DNA
<213> Peptostreptococcus anaerobius ATCC 27337

<400> 966									
caccagttcg	ccaagtgggc	agatgctcag	atagttgtat	acgttggttg	tgagagaact	60			
ggtaacgaga	tgacagacgt	tctaaatgaa	ttcccagaac	tgattgacct	tcatacaggc	120			
gaatctctaa	tgaagagaac	agttcttata	gctaatacgt	caaataatgcc	agttgcagcc	180			
agagaggcaa	gtatatatac	aggatttaca	atagctgaat	aggccctaag	agagatgtca	240			
tcagtagcgg	taatggccga	ctctacatca	agatgggcag	cctatctagg	ttctagagct	300			
ggtcgtctag	aagaaatgcc	tggtgatgaa	ggttatccag	gtagcgataa	tagagaggga	360			
gcagagttct	atgaaagagc	aggtaaggta	atatgtaagg			420			
gcccttataa	taatagggtgc	cgtgtcacc				449			

<210> 967
 <211> 826
 <212> DNA
 <213> Bordetella pertussis ATCC 9797

```

<400> 967
ctgggtggtgt cggccgcaga cggccccgatg ccgcagacgc gcgagcacat tttgctgtcg 60
cgccagggttg gcgtgccgta catcatcgtg ttccctgaaca aggcggacat ggttgatgac 120
gcgagagctgc tcgagctggt gaagatggaa gtccgcgaac tgctgagcaa gtacgatttc 180
ccgggcgatg acacgccgat cgtgaagggt tcggccaagc tggcgctgga aggcgacaag 240
ggcgaactgg gcgagcaggc gattctgtcg ctggcgcaag cgctggacac gtacattccg 300
acgccggagc gcgcggtcga cgggtgcgttc ctgatgccgg tggaagacgt gttctcgatc 360
tcgggcccgtg gcacgggtgg gactggccgt atcgagcgcg gcgtggtgaa ggttggcgag 420
gaaatcgaaa tcgtgggcat caagccgacg gtgaagacga cctgcacggg cgtggagatg 480
ttccgcaagc tgctggacca gggccaggcg ggcgacaacg tgggtatctt gctgcgcggc 540
accaagcgtg aagacgtcga gcgtggccag gtgctggcca agccgggttc gatcaaccgc 600
cacacggact tcacggccga ggtgtacatt ctgtccaagg aagagggtgg ccgtcacacg 660
ccgttcttca acggctatcg tccgcagttc tacttccgca cgacggacgt gaccggcacg 720
atcgacctgc cggcggacaa ggaaatggtg ctgccgggcg acaacgtgtc gatgaccgtc 780
aagctgctgg ccccgatcgc catggaagaa ggtctgcgtt tcgcca 826
  
```

<210> 968
 <211> 817
 <212> DNA
 <213> Bordetella pertussis strain BD180

```

<400> 968
cgatcctggt ggtgtcggcc gcagacggcc cgatgccgca gacgcgcgag cacattttgc 60
tgctcgcgcca ggttggcggt ccgtacatca tcgtgttcct gaacaaggcg gacatggttg 120
atgacgcgga gctgctcgag ctggtggaga tggaaagtcg cgaactgctg agcaagtacg 180
atttcccggt cgatgacacg ccgatcgtga agggttcggc caagctggcg ctggaaggcg 240
acaaggcgga actgggcgag caggcgattc tgctcgtggc gcaagcgcgt gacacgtaca 300
ttccgacgcc ggagcgcgcg gtcgacgggt cgttcctgat gccggtggaa gacgtgttct 360
cgatctcggg ccgtggcacg gtggtgactg gccgtatcga gcgcggcggt gtgaagggtg 420
gcgaggaaat cgaaatcgtg ggcatacaag cgacggtgaa gacgacctgc acgggcgtgg 480
agatgttccg caagctgctg gaccagggcc agcgggcgga caactgggtg atcttgctgc 540
gcggcaccaa gcgtgaagac gtcgagcgtg gccaggtgct ggccaagccg ggttcgatca 600
acccgcacac ggacttcacg gccgaggtgt acattctgtc caaggaagag ggtggccgtc 660
acacgccgtt cttcaacggc tatcgtccgc agttctactt ccgcacgacg gacgtgaccg 720
gcacgatcga cctgccggcg gacaaggaaa tgggtgctgc gggcgacaac gtgtcgatga 780
ccgtcaagct gctggccccg atcgccatgg aagaagg 817
  
```

<210> 969
 <211> 637
 <212> DNA
 <213> Enterococcus columbae ATCC 51263

```

<400> 969
cctatgccac aaactcgtga acacattctt ttatcacgta acgttggtgt gccatacatc 60
ggtgttttct taaacaaagt tgatatggtt gacgacgaag aattattaga attagttaga 120
atggaagtgc gtgacttatt aactgaatat gacttcccag gagacgatgt tcctgtaatc 180
gctgggttctg cattaaaagc tttagaaggc gacctgctt acgaagaaaa aatcttagaa 240
ttaatggctg cagttgacga atacatccca actccagaac gtgacaacga caaaccattc 300
atgatgccag ttgaagacgt gttctcaatt actggctcgt gtactgttgc tacaggtcgt 360
gttgaacgtg gacaagttcg tgttggtgac gaagttgaaa tcgttggtat cgctgacgaa 420
acttctaaaa caacagttac tgggtgttga atgttccgta aattattaga ttacgctgaa 480
gctggagaca acatcggtgc attattacgt ggtgtggctc gtgaagacat ccaacgtggt 540
caagtattag ctaaaaccagg ttcaatcact ccacatacaa aattcactgc tgaagtgtac 600
gttttaacta aagaagaagg tggacgtcat actccat 637
  
```

<210> 970
 <211> 634
 <212> DNA

<213> *Enterococcus flavescens* ATCC 49997

```

<400> 970
tatgcctcaa acacgtgaac acatcttggt atcacgtaac gttggtgtac catacatcgt 60
tgttttctta aacaaaaatgg atatggttga tgacgaagaa ttactagaat tagttgaaat 120
ggaagtctgt gacttattgt cagaatatga cttcccaggc gacgatgttc ctgtaatcgc 180
tggttctgct ttgaaagctc ttgaaggcga tgcttcatac gaagaaaaaa tcatggaatt 240
aatggctgca gttgacgaat acgttccaac tccagaacgt gacactgaca aaccattcat 300
gatgccagtc gaagacgtat tctcaatcac tggacgtggt actgttgcta caggccgtgt 360
tgaacgtgga caagttcgcg ttggtgacga agttgaaatc gttggtattg ctgaagaaac 420
tgctaaaaca actgtaactg gtgttgaaat gttccgtaaa ttgttagact atgctgaagc 480
aggggataac attggtgcat tgctacgtgg ggttgctcgt gaagacatcc aacgtggaca 540
agtattagct aaagctggta caatcacacc tcatacaaaa tttaaagctg aagtttacgt 600
tttaacaaaa gaagaagggtg gacgtcacac tcca

```

<210> 971

<211> 787

<212> DNA

<213> *Streptococcus pneumoniae* strain StrR-55

```

<400> 971
ggaccaatgc cacaaactcg tgagcacatc cttctttcac gtcaggttgg tgttaaacaac 60
cttatcgtct tcatgaacaa agttgacttg gttgacgacg aagaattgct tgaattgggt 120
gaaatggaaa tccgtgacct attgtcagaa tacgacttcc caggtgacga tcttccagtt 180
atccaagggt cagcacttaa agctcttgaa ggtgactcta aatacgaaga catcgttatg 240
gaattgatga acacagttga tgagtataat ccagaaccag aacgtgacac tgacaaaacca 300
ttgcttcttc cagtcgagga cgtattctca atcactggac gtggtacagt tgcttcagga 360
cgtatcgacc gtggtatcgt taaagtcaac gacgaaatcg aaatcgttgg tatcaaagaa 420
gaaactcaaa aagcagttgt tactggtggt gaaatggtcc gtaaacaact tgacgaaggt 480
cttgctggag ataacgtagg tgtccttctt cgtggtgttc aacgtgatga aatcgaacgt 540
ggacaagtta tcgctaaaacc aggttcaatc aacccacaca ctaaattcaa aggtgaagtc 600
tacatcctta ctaaagaaga aggtggacgt cacactccat tcttcaacaa ctaccgtcca 660
caattctact tccgtactac tgacgttaca ggttcaatcg aacttccagc aggtactgaa 720
atggtaatgc ctggtgataa cgtgacaatc gacgttgagt tgattcacc aatcgccgta 780
gaacaag

```

<210> 972

<211> 803

<212> DNA

<213> *Escherichia coli* ATCC 35401

```

<400> 972
tagttgctgc gactgacggc cccgatgccg agactcgtga gcacatcctg ctgggtcgtc 60
aggtaggcgt tccgtacatc atcgtgttcc tgaacaaatg cgacatgggt gatgacgaag 120
agctgctgga actggttgaa atggaagttc gtgaacttct gtctcagtag gacttcccgg 180
gacgacgacac tccgatcgtt cgtggttctg ctctgaaagc gctggaaggc gacgcagagt 240
gggaagcgaa aatcctggaa ctggctgggt tcctggattc ttacattccg gaaccagagc 300
gtgcgattga caagccgttc ctgctgccga tcgaagacgt attctccatc tccggtcgtg 360
gtaccgttgt taccggtcgt gtagaacgcg gtatcatcaa agttggtgaa gaagttgaaa 420
tcgttggtat caaagagact cagaagtcta cctgtactgg cgttgaaatg ttccgcaaac 480
tgctggacga aggcctgctt ggtgagaacg taggtgttct gctgcgtggg atcaaactgt 540
aagaaatcga acgtgggtcag gtactggcta agccgggcac catcaagccg cacaccaagt 600
tcgaatctga agtgtacatt ctgtccaaag atgaaggcgg ccgtcatact ccgttcttca 660
aaggctaccg tccgcagttc tacttccgta ctactgacgt gactggtacc atcgaaactgc 720
cggaaggcgt agagatggta atgccgggag acaacatcaa aatggttggt accctgatcc 780
acccgatcgc gatggacgac ggt

```

<210> 973

<211> 762

<212> DNA

<213> *Escherichia coli* ATCC 43895

<400> 973

```

actgacggcc cgatgccgca gactcgtgag cacatcctgc tgggtcgtca ggtaggcggt 60
ccgtacatca tcgtgttctt gaacaaatgc gacatgggtg atgacgaaga gctgctggaa 120
ctgggtgaaa tggaagtctg tgaacttctg tctcagtagc acttcccggg cgacgacact 180
ccgatcggtc gtggttctgc tctgaaagcg ctggaaggcg acgcagagtg ggaagcgaaa 240
atcctggaac tggttggtt cctggattcc tacattccgg aaccagagcg tgcraattgac 300
aagccgttcc tgctgccgat cgaagacgta ttctccatct ccggtcgtgg taccgttggt 360
accggtcgtg tagaacgcgg tatcatcaaa gttggtgaag aagttgaaat cgttggtatc 420
aaagagactc agaagtctac ctgtactggc gttgaaatgt tccgcaaaact gctggacgaa 480
ggcgtgctg gtgagaacgt aggtgttctg ctgctgggta tcaaactgta agaaatcgaa 540
cgtgggtcagg tactggctaa gccgggcacc atcaagccgc acaccaagt cgaatctgaa 600
gtgtacattc tgtccaaaga tgaaggcgcc cgtcatactc cgttcttcaa aggctaccgt 660
ccgcagttct acttccgtac tactgacgtg actggtacca ttgaactgcc ggaaggcgta 720
gagatggtaa tgccgggcca caacatcaaa atggttggtta cc 762

```

<210> 974
 <211> 804
 <212> DNA
 <213> Escherichia coli ATCC 11775

```

<400> 974
cctggtagtt gctgcgactg acggcccgat gccgcagact cgtgagcaca tcctgctggg 60
tcgtcaggta ggcttccgt acatcatcgt gttcctgaac aaatgcgaca tggttgatga 120
cgaagagctg ctggaactgg ttgaaatgga agttcgtgaa cttctgtctc agtacgactt 180
cccgggagac gacactccga tcgttcgtgg ttctgctctg aaagcgtctg aaggcgacgc 240
agagtgggaa gcgaaaatcc tggaactggc tggcttctg gattcctaca ttccggaacc 300
agagcgtgag attgacaagc cgttcctgct gccgatcgaa gacgtattct ccatctccgg 360
tcgtgggtacc gttgttaccg gtcgtgtaga acgcggatc atcaaagttg gtgaagaagt 420
tgaaatcggt ggtatcaaag agactcagaa gtctacctgt gaacgtaggt gttctgctgc gcggtatcaa 480
caaactgctg gacgaaggcc gtgctgggtg gacgttaggt gttctgctgc gcggtatcaa 540
acgtgaagaa atcgaacgtg gtcaggtagt ggctaagccg ggcaccatca agccgcacac 600
caagttcgaa tctgaagtgt acattctgtc caaagatgaa ggcggctcgt atactccgtt 660
cttcaaaggc taccgtccgc agttctactt ccgtactact gacgtgactg gtaccatcga 720
actgccgaa ggctagaga ttgtaaatgcc gggcgacaac atcaaaatgg ttgttaccct 780
gatccacccg atcgcgatgg acga 804

```

<210> 975
 <211> 804
 <212> DNA
 <213> Escherichia coli ATCC 25922

```

<400> 975
gcgatcctgg tagttgctgc gactgacggc ccgatgccgc agactcgtga gcacatcctg 60
ctgggtcgtc aggtaggcgt tccgtacatc atcgtgttcc tgaacaaatg cgacatgggt 120
gatgacgaag agtgctgga actggttgaa atggaagtcc gtgaacttct gtctcagtac 180
gacttcccgg gcgacgacac tccgatcgtt cgtggttctg ctctgaaagc gctggaaggc 240
gacgcagagt gggaaagcgaa aatcctggaa ctggctggct tcctggattc ytacattccg 300
gaaccagagc gtgcgattga caagccgttc ctgctgccga tcgaagacgt attctccatc 360
tccggtcgtg gtaccgttgt taccggctcg gtagaacgcg gtatcatcaa agttgggtgaa 420
gaagttgaaa tcgttggtat caaagagact cagaagtcta cctgtactgg cgttgaaatg 480
ttccgcaaac tgctggacga aggcctgct ggtgagaacg taggtgttct gctgctgggt 540
atcaaactg aagaaatcga acgtggtcag gtactggcta agccgggcac catcaagccg 600
cacaccaagt tcgaatctga agtgatcatt ctgtccaaag atgaaggcgg tcgtcatact 660
ccgttcttca aaggctaccg tccgcagttc tacttccgta ctactgacgt gactggtacc 720
atcgaactgc cggaaggtgt agagatggta atgccgggcg acaacatcaa aatgggtggt 780
accctgatcc acccgatcgc gatg 804

```

<210> 976
 <211> 825
 <212> DNA
 <213> Mycobacterium avium strain Mavi-1

```

<400> 976
ggcgcgatcc tggtggctgc cgccaccgac ggcccgatgc cgcagacccg tgagcacgtg 60

```

```

ctgctcgcgc gtcagggtcgg tgtgccctac atcctggtcg ccctgaacaa ggccgacatg 120
gtcgacgacg aggagctcct cgagctcgtc gagatggagg tccgcgagct gctggccgcc 180
caggagttcg acgaggacgc cccggtggtg cgggtctcgg cgctcaaggc gctcgagggc 240
gacgccaagt ggggtcgagtc cgtcgagcag ctgatggagg ccgtcgacga gtcgatcccc 300
gacccgggtcc gcgagacgga gaagccgttc ctgatgccgg tggaggacgt cttcaccatc 360
accgggctgt gcaccgtggt caccggtcgt gtcgagcgcg gtgtgatcaa cgtgaacgag 420
gaagtcgaga tcgtcggcat ccgcccgcac agcaccaaga ccacggtcac cgggtgtggar 480
atgttccgca agctgctcga ccagggccag gccggtgaca acgtcgggtc gctgctgcgt 540
ggatcaaacg gtgaggacgt cgagcgcgcc caggctcgta ccaagcccgg caccaccacg 600
ccgcacaccg agttcgaggg ccaggtctac atcctgtcca aggacgaggg cggccggcac 660
acgcccgttct tcaacaacta ccgtccgcag ttctacttcc gcaccaccga cgtgaccggt 720
gtggtgacgc tgccggaggg caccgagatg gtgatgcccg gtgacaacac caacatctcg 780
gtgaagctga tccagcccgt cgccatggac gacggtstgc ggttc 825

```

<210> 977

<211> 820

<212> DNA

<213> Streptococcus pneumoniae strain StrR-06

<400> 977

```

tataccttga gtagcttcaa ctgacggacc aatgccacaa actcgtgagc acatccttct 60
ttcacgtcag gttggtgtta aacaccttat cgtcttcatg aacaaagttg acttggttga 120
cgacgaagaa ttgcttgaat tgggtgaaat ggaaatccgt gacctattgt cagaatacga 180
cttcccaggt gacgatcttc cagttatcca aggttcagca cttaaagctc ttgaaggtga 240
ctctaaatac gaagacatcg ttatggaatt gatgaacaca gttgatgagt atatccaga 300
accagaacgt gacactgaca aaccattgct tcttcagtc gaggacgtat tctcaatcac 360
tggacgtggt acagttgctt caggacgtat cgaccgtggt atcgttaaag tcaacgacga 420
aatcgaaatt gttggtatca aagaagaaac tcaaaaagca gttgttactg gtgttgaaat 480
gttccgtaaa caacttgacg aaggtcttgc tggagataac gtaggtgtcc ttcttcgtgg 540
tgttcaacgt gatgaaatcg aacgtggaca agttatcgct aaaccaggtt caatcaaccc 600
acacactaaa ttcaaagggt aagttctacat cttactaaa gaagaagggt gacgtcacac 660
tccattcttc aacaactacc gtccacaatt ctacttccgt actactgacg ttacaggttc 720
aatcgaactt ccagcaggtg ctgaaatggt aatgcctggt gataacgtga caatcgacgt 780
tgagttgatt cacccaatcg ccgtagaaca aggtactaca 820

```

<210> 978

<211> 822

<212> DNA

<213> Mycobacterium gordonae strain M-Gor-1

<400> 978

```

ggcgcgatcc tgggtggtcgc cgccaccgat ggcccgatgc cgcagacccg tgagcacgtg 60
ctgctcgcgc gtcagggtggg cgtgccctac atcctggtgg cgctgaacaa gtccgacgcg 120
gtcgacgacg aggagctgct cgagctcgtc gagctggagg tccgcgagtt gctggccgcc 180
caggacttcg acgaggaagc tccggtggtc cgggtctcgg cgctgaaggc gctcgagggc 240
gacgccacct ggggtgaagtc ggtagaggac ttgatggacg cggtcgacga gtcgattccg 300
gacccgggtcc gcgacaccga caagccgttc ctgatgcccg tcgaggacgt cttcaccatc 360
accggtcgtg gcaccgtcgt caccggccgt gtggagcgcg gcgtggtgaa cgtgaacgag 420
gaagtcgaga tcgtcggcat caagccgacc agcaccaaga ccacggtcac cgggtgtggag 480
atgttccgca agctgctcga ccagggtcag caggctcgta acgtcgggtc gctgctgcgt 540
gggtgtcaagc gtgaggacgt cgagcgcgcc caggtcgta tcaagcccgg caccaccact 600
ccgcacaccg agttcgaggg tcaggtctac atcctgtcca aggacgaggg cggccggcac 660
acgcccgttct tcaacaacta ccgtccgcag ttctacttcc gcaccaccga cgtgaccggt 720
gtggtgacgc tgccggaggg caccgaaatg gtgatgcccg gtgacaacac caacatctcg 780
gtgaagctga tccagcccgt cgccatggac gacggtctgc gg 822

```

<210> 979

<211> 821

<212> DNA

<213> Streptococcus pneumoniae strain StrR-11

<400> 979

```

ctataccttgt agtagcttca actgacggac caatgccaca aactcgtgag cacatccttc 60

```



```

tttcacgtca ggttggtggt aaacacctta tcgtcttcat gaacaaagtt gacttggttg 120
acgacgaaga attgcttgaa ttggttgaaa tggaaatccg tgacctattg tcagaatacg 180
acttcccagg tgacgatctt ccagttatcc aagggttcagc acttaaagct cttgaagggtg 240
actctaaata cgaagacatc gttatggaat tgatgaacac agttgatgag tatatcccag 300
aaccagaacg tgacactgac aaaccattgc ttcttccagt cgaggacgta ttctcaatca 360
ctggacgtgg tacagttgct tcaggacgta tcgaccgtgg tatcggttaa gtcaacgacg 420
aaatcgaaat cgttggtatc aaagaagaaa ctcaaaaagc agttgttact ggtggtgaaa 480
tgttccgtaa acaacttgac gaaggtcttg ctggagataa cgtaggtgtc cttcttcgtg 540
gtgttcaacg tgatgaaatc gaacgtggac aagttatcgc taaaccaggt tcaatcaacc 600
cacacactaa attcaaaggt gaagtctaca tccttactaa agaagaaggt ggacgtcaca 660
ctccattctt caacaactac cgtccacaat tctacttccg tactactgac gttacaggtt 720
caatcgaaat tccagcaggt actgaaatgg taatgcctgg tgataacgtg acaatcgacg 780
ttgagttgat tcaccaatc gccgtagaac aagggtactac a 821

```

```

<210> 980
<211> 828
<212> DNA
<213> Mycobacterium tuberculosis ATCC 25177

```

```

<220>
<221> misc_feature
<222> (817)..(817)
<223> n represents any nucleotide

```

```

<400> 980
ggtgcatcc tgggtggtcgc cgccaccgac ggcccgatgc cccagacccg cgagcacgtt 60
ctgctggcgc gtcaagtggg tgtgccctac atcctggtag cgctgaacaa ggccgacgca 120
gtggacgacg aggagctgct cgaactcgtc gagatggagg tccgcgagct gctggctgcc 180
caggaattcg acgaggacgc cccggttggt cgggtctcgg cgctcaaggc gctcgagggt 240
gacgcgaagt ggggttgccctc tgtcgaggaa ctgatgaacg cggtcgacga gtcgattccg 300
gacccggtcc gcgagaccga caagccgttc ctgatgccgg tcgaggacgt cttcaccatt 360
accggccgcg gaaccgtggt caccggacgt gtggagcgcg gcgtgatcaa cgtgaacgag 420
gaagttgaga tcgtcggcat tcgcccacgc accaccaaga ccaccgtcac cgggtgaggag 480
atgttccgca agctgctcga ccagggccag gcgggcgaca acgttggttt gctgctgcgg 540
ggcgtcaagc gcgaggacgt cgagcgtggc cagggtgtca ccaagcccgg caccaccacg 600
ccgcacaccg agttcgaaag ccaggtctac atcctgtcca aggacgaggg cggccggcac 660
acgccgttct tcaacaacta ccgtccgcag ttctacttcc gcaccaccga cgtgaccggt 720
gtggtgacac tgccggaggg caccgagatg gtgatgcccg gtgacaacac caacatctcg 780
gtgaagttga tccagcccgt cgccatggac gaaggtnatg gtttcgcg 828

```

```

<210> 981
<211> 819
<212> DNA
<213> Staphylococcus warneri strain CSG 144

```

```

<400> 981
cggcggtatc ttagtagtat ctgctgcaga tggcccgaat ccacaaactc gtgaacacat 60
cttattatca cgtaacgttg gtgtaccagc ttttagttgta ttcttaaaca aagctgacat 120
ggttgacgac gaagaattat tagaattagt tgaaatggaa gttcgtgact tattatctga 180
atacgacttc cctggtgacg atgtaccagt tatcgttggt tctgcattaa aagctttaga 240
aggcgaccca gaatacgaac aaaaaatctt agacttaatg caagctgtag atgactacat 300
cccaactcca gaacgtgact ctgataaacc attcatgatg ccagttgagg acgtattctc 360
aatcactggt cgtgggtactg tagcaacagg ccgtgttgaa cgtggtcaaa tcaaagtcgg 420
tgaagaagtt gaaatcatcg gtatcactga agaaagcaag aaaacaacag ttacaggtgt 480
agaaatgttc cgtaaattat tagactacgc tgaagctggt gacaacatcg gtgctttatt 540
acgtggtggt gcacgtgaag acgtacaacg ttgacaagta ttagcagctc ctggctctat 600
tactccacac acaaaattca aagctgatgt ttacgtttta tctaaagaag aaggtggacg 660
tcatactcca ttcttacta actaccgccc acaattctac ttccgtacta ctgacgtaac 720
tggcggtgtt cacttaccag aaggctactg aatggttatg cctggcgata acgtagaaat 780
gactgttgaa ttaatcgctc caatcgcatg tgaagacgg 819

```

```

<210> 982
<211> 814

```

<212> DNA
<213> Streptococcus mitis strain LSPQ 2583

```

<400> 982
ctatccttgt agtagcttca actgacggac caatgccaca aactcgtgag cacatccttc 60
tttcacgtca ggttggtggt aaacacctta tcgtcttcat gaacaagatc gacttggttg 120
atgacgaaga attgcttgaa ttggttgaaa tggaaatccg tgacctcttg tcagaatacg 180
acttcccagg tgacgatctt ccagttatcc aagggttcagc tcttaaagct cttgaagggtg 240
atactaagta cgaagacatc atcatggaat tgatgaacac tgttgatgag tacatcccag 300
aaccagaacg tgatactgac aaacctcttc ttcttccagt cgaagacgta ttctcaatca 360
ctggctcgtg tacagttgct tcaggacgta tcgaccgtgg tactgttcgt gtcaacgatg 420
aaatcgaaat cggttggtatc aaagaagaaa tccaaaaagc agttgttact ggtgttgaaa 480
tggtccgtaa acagcttgac gaaggtcttg caggggacaa cgtaggtgta cttcttcgtg 540
gtatccaacg tgatgaaatc gaacgtggctc aagttatcgc taaaccaggt tcaatcaacc 600
cacacactaa attcaagggt gaagttttaca tccttactaa agaagaaggt ggacgtcaca 660
ctccattctt caacaactac cgtccacagt tctacttccg tacaactgac gttacagggt 720
caatcgaaat tccagcaggt actgaaatgg taatgcctgg tgataacgta actatcgacg 780
ttgagttgat ccaccaatc gccgttgaaac aagg 814

```

<210> 983
<211> 810
<212> DNA
<213> Streptococcus mitis ATCC 49456

```

<400> 983
ctatccttgt agtagcttca actgacggac caatgccaca aactcgtgag cacatccttc 60
tttcacgtca ggttggtggt aaacacctta tcgtcttcat gaacaaagt gacttggttg 120
acgacgaaga attgcttgaa ttggttgaaa tggaaatccg tgacctattg tcagaatacg 180
acttcccagg tgacgatctt ccagttatcc aagggttcagc tcttaaagcc cttgaagggtg 240
aactaaata cgaagacatc gttatggaat tgatgaacac agttgatgag tacatcccag 300
aaccagaacg tgacactgac aaaccattgc ttcttccagt cgaagacgta ttctcaatca 360
ctggctcgtg tacagttgct tcaggacgta tcgaccgtgg tctcgttaa gtcaacgatg 420
aaatcgaaat cggttggtatc aaagaagaaa ctcaaaaagc agttgttact ggtgttgaaa 480
tggtccgtaa acaacttgac gaaggtcttg ccggagataa tgtaggtgtc cttcttcgtg 540
gtgttcaacg tgatgaaatc gaacgtggac aagttattgc taaaccaggt tcaatcaacc 600
cacacactaa attcaaaagg gaagttttaca tccttactaa agaagaaggt ggacgtcaca 660
ctccattctt caacaactac cgtccacaat tctacttccg tactactgac gttacagggt 720
caatcgaaat tccagcaggt actgaaatgg taatgcctgg tgataacgtg acaatcgacg 780
ttgagttgat ccaccaatc gccgtagaac 810

```

<210> 984
<211> 817
<212> DNA
<213> Streptococcus mitis ATCC 903

```

<400> 984
tccttgtagt agcttcaact gacggacca tgccacaaac tcgtgagcac atccttcttt 60
cacgtcaggt tgggtgttaa cactttatcg tcttcatgaa caagatcgac ttggttgatg 120
acgaagaatt gcttgaattg gttgaaatgg aaatccgtga cctcttgta gaatacgact 180
tcccagggtg cgtcttcca gttatccaag gttcagctct taaagctctt gaagggtgata 240
ctaagtacga agacatcatc atggaattga tgaacactgt tgatgagtag atcccagaac 300
cagaacgtga tactgacaaa cctcttcttc ttccagtcga agacgtattc tcaatcactg 360
gtcgtggtac agttgcttca ggacgtatcg accgtggtag tggtcgtgtc aacgatgaaa 420
tcgaaatcgt tggatcaaaa gaagaaatcc aaaaagcagt tgttactggt gttgaaatgt 480
tccgtaaaca gcttgacgaa ggtcttgtag gggacaacgt accaggttca atcaaccac 600
tccaacgtga tgaaatcgaa cgtgggtcaag ttatcgctaa accaggttca atcaaccac 660
aactaaat caaggtgaa gtttacatcc ttactaaaga agaaggtgga cgtcacactc 660
cattcttcaa caactaccgt ccacagttct acttccgtac aactgacgtt acaggttcaa 720
tcgaacttcc agcaggtact gaaatggtaa tgcttggtga taacgtaact atcgacgttg 780
agttgatcca cccaatcgcc gttgaacaag gtactac 817

```

<210> 985
<211> 798

<212> DNA

<213> *Streptococcus oralis* ATCC 35037

<400> 985

```

gacggacca  tgccacaaac  tcgtgagcac  atccttcttt  cacgtcaggt  tgggtgttaa  60
caccttattg  tcttcatgaa  caaaattgac  ttggtagacg  acgaagaatt  gcttgaattg  120
gttgaaatgg  aaatccgtga  cctcttggtc  gaatacgact  tcccaggtga  cgatcttcca  180
gttatccaag  gttcagctct  taaagctctt  gaagggtgact  ctaaatacga  agacatcatt  240
atggaattga  tgaacactgt  tgatgagtac  atcccagaac  cagaacgtga  cactgaaaaa  300
ccattgcttc  ttccagtcga  agacgtatct  tcaatcactg  gacgtggtag  agttgcttca  360
ggacgtatcg  accgtggtag  tgcttcgtgc  aacgacgaaa  tcgaaatcgt  tgggtatcaa  420
gaagaaactc  aaaaagcagt  tgttactggg  gttgaaatgt  tccgtaaaca  acttgacgaa  480
ggtcttgccg  gagataacgt  aggtgtcctt  cttcgtgggt  ttcaacgtga  cgaaatcgaa  540
cgtggacaag  ttatcgctaa  accaggttca  atcaaccac  acactaaatt  taaaggtgaa  600
gtctacatcc  ttactaaaga  agaaggtgga  cgtcacactc  cattcttcaa  caactaccgt  660
ccacaattct  acttccgtac  tactgacgtt  acaggttcaa  tcgaacttcc  tgcaggtact  720
gaaatggtaa  tgccctggta  taacgtgact  atcgacgttg  agttgatcca  cccaatcgcc  780
gtagaacaag  gtactaca

```

<210> 986

<211> 815

<212> DNA

<213> *Streptococcus pneumoniae* strain StrR-05

<400> 986

```

ttgtagtagc  ttcaactgac  ggaccaatgc  cacaaactcg  tgagcacatc  cttctttcac  60
gtcagggttg  tgtaaacac  cttatcgtct  tcatgaacaa  agttgacttg  gttgacgacg  120
aagaattgct  tgaattgggt  gaaatggaaa  tccgtgacct  attgtcagaa  tacgacttcc  180
cagggtgacg  tcttccaggt  atccaaggtt  cagcacttaa  agctcttgaa  ggtgactcta  240
aatacgaaga  catcgttatg  gaattgatga  acacagttga  tgagtatatt  ccagaaccag  300
aacgtgacac  tgacaaacca  ttgcttcttc  cagtcgagga  cgtattctca  atcactggac  360
gtggtacagt  tgcttcagga  cgtatcgacc  gtggtatcgt  taaagtcaac  gacgaaatcg  420
aaatcggttg  tatcaaagaa  gaaactcaaa  aagcagttgt  tactgggtgt  gaaatgttcc  480
gtaaacaact  tgacgaaggt  cttgctggag  ataacgtagg  tgtccttctt  cgtgggtgtc  540
aacgtgatga  aatcgaaact  ggacaagtta  tcgctaaacc  aggttcaatc  aacccacaca  600
ctaaattcaa  aggtgaagtc  tacatcctta  ctaaagaaga  aggtggacgt  cacactccat  660
tcttcaacaa  ctaccgtcca  caattctact  tccgtactac  tgacgttaca  gggttcaatcg  720
aacttccagc  aggtactgaa  atggtaatgc  ctggtgataa  cgtgacaatc  gacgttgagt  780
tgattcaccc  aatcgccgta  gaacaaggta  ctaca

```

<210> 987

<211> 832

<212> DNA

<213> *Enterococcus hirae* ATCC 8043

<400> 987

```

cggacaatct  tgggtgtttc  tgctacggat  ggcccaatgc  ctcaaactcg  tgaacacatt  60
ttactttctc  gccaaagtagg  cgtgaaatat  ttgattgttt  tcttgaacaa  aacagattta  120
gtcgatgatg  aagaattaat  tgatctagta  gaaatggaa  ttcgtgaact  attaaagcga  180
tatggatttc  cagggtgatga  tacacctggt  atcaaaggat  cagcattaaa  agcattacaa  240
ggtgatcctg  atgcagaagc  agctatcatg  gaattgatgg  acacagtcga  tgaatacatc  300
ccaacaccag  aacgtgatac  ggacaaacca  ttattgttac  ccgccgaaga  tgtattttca  360
attactggac  gtggaacagt  agcatctggt  cggattgacc  gtggggctgt  tagagtcggt  420
gacgaaatcg  aaatcgtagg  gatcaaacca  gaaacgcaaa  gagccgtagt  aacaggagtt  480
gaaatgttcc  gcaaaacgct  tgattacggt  gaagcagggg  ataacgtagg  tgtgttatta  540
cgtgggattc  aaagagaaga  catcgaacgt  ggccaagtga  ttgccaaacc  tggttcaatt  600
acacctcata  ctaaattcaa  agcagaagtt  taggttttga  ctaaaagaaga  aggcggacgt  660
catacaccat  tcttcaataa  ttatcgacca  caattttatt  tccgcacaac  tgacgtaaca  720
ggaacaattg  ttttgccaga  aggaacggaa  atggtcatgc  ctggcgacaa  cgtaacgatc  780
gatgtagaat  tgattcatcc  tgttgctatt  gaaaacggga  cgactttctc  ca

```

<210> 988

<211> 835

<212> DNA

<213> *Enterococcus mundtii* ATCC 43186

<400> 988

```

tggtgcatc ttagttgttt ctgcgacaga tggaccaatg cctcaaactc gcgagcatat 60
ccttttatca cgtcaagttg gtgtaaaata tttgattgta tttttgaata aagttgattt 120
ggtcgatgat gaagaattga tcgatcttgt agaaatggaa gttcgtgaat tactgaatga 180
atatggtttc ccaggtgatg acacacctgt catcaaaggc tctgcattga aagcattgca 240
aggtgaccca gaagcagaag ctgcgatcaa tgaattgatg gaaacagtgg atgactatat 300
cccaacacca gaacgtgata ccgacaaacc attgctttta ccagttgaag atgttttctc 360
aatcactggt cgcggaacgg tagcatctgg tcgtatcgac cgtggagccg ttcgtgtcgg 420
tgatgaaatc gagatcatcg gaatcaaacc tgaacgaaa aaagcgggtg tgacaggggt 480
agagatgttc cgtaaaacgt tagattatgg cgaagctgga gataacgtag gaatcttgtt 540
acgtggatc caaagagaag atattgaacg tggacaagta attgcgaaac ctggttcaat 600
cacaccacat acaaaattca aagcgggaagt ttatgtattg acgaaagaag aaggcggacg 660
tcatacacca ttcttcaata actaccgccc acaattttat ttccgcacaa cagatgtaac 720
aggtacgatc gtgttgccag aaggaacaga aatggctcatg cctggagaca acgtaaccat 780
cgaggtagag ttgatccatc cagtggcaat cgaacaagga acgactttct ctatt 835

```

<210> 989

<211> 832

<212> DNA

<213> *Enterococcus raffinosus* ATCC 49427

<400> 989

```

tgcgatctta gtagtatcta ctactgatgg accaatgcct caaacacgtg agcacatttt 60
gttatcacgc caagtaggtg ttaaatactt gatcgtcttc ttgaacaaag ttgatttagt 120
cgacgatgaa gaattgattg atttagttga aatggaagta cgtgagttac tttcagaata 180
tggtttccca ggcatgata ttctgttct taaaggttca gctctgaaag ctttagaagg 240
cgatcctgaa caagaacaag taatcatgga cctaattggat acggttgacg aatataatccc 300
aacaccagaa cgtgacactg acaaaccatt cttgttacca gtggaagatg ttttctcaat 360
cacaggacgt gggactgttg catctggctg tattgatcgt ggggaagtta aagtcggtga 420
cgaagttgaa attatcgagg tcaaacctga agttcaaaaag gctgtcgtaa ctggacttga 480
aatgttccgt aaaacattgg attatggtga agctggagat aacgttgggg ttctattacg 540
tggtattaca cgtgatgaaa tcgaacgtgg tcaagtatta gctaaaccag gttcaattac 600
accacatacg aaattcagtg cagaagttta tgtgttgacg aaagaagaag gtggacgtca 660
tacaccattc ttaacaact atcgtcctca attctacttc cgtacaacag acgttaccgg 720
taatatcgtg ttgccagaag gtactgaaat ggtcatgcct ggcgataacg taacaatcga 780
cgttgaatta atccatccaa tcgccgtaga aaaagggaaca acttttctcta tt 832

```

<210> 990

<211> 154

<212> DNA

<213> *Bacillus anthracis* strain CIP 9440

<400> 990

```

ggatcctgta tatgcacaaa aactaggtgt taacatcgat gaattactat tatcacaacc 60
tgatacaggg gagcaagggt tagaaatcgc agaagcactt gtacgaagtg gtgcgggtga 120
tattatcgtg attgactctg tagcagctct tgta 154

```

<210> 991

<211> 384

<212> DNA

<213> *Prevotella melaninogenica* ATCC 25845

<400> 991

```

gccattgcat aggcacagaa gcagggcggt attgcagcct tcattgatgc tgagcacgcc 60
ttcgaccgtt tctatgcaga gaagttagggt gtggatgttg ataacctttg ggtttcacag 120
ccagacaatg gtgagcaggc tttagagatt gccgaccagc tgattcgctc ttccgctatt 180
gacattctcg ttgtcgactc agttgcagcc ttgactccaa agaaggagat tgaggggtgac 240
atgggtgact ctgcagtagg tttacaagca cgactgatga gtcaggcatt gcgtaaaact 300
acctcaacaa tcgcaaaaac taatacttgc tgcattctta tcaaccagtt gcgtgagaag 360
attggtgtga tgtttggtta tcca 384

```

<210> 992
 <211> 624
 <212> DNA
 <213> Enterococcus casseliflavus strain R760

```

<400> 992
acacgtgaac acatcttgtt atcacgtaac gttggtgtac catacatcgt tgttttctta 60
aacaaaatgg atatggttga tgacgaagaa ttactagaat tagttgaaat ggaagttcgt 120
gacttattgt cagaatatga cttcccaggc gacgatgttc ctgtaatcgc tggttctgct 180
ttgaaagctc ttgaaggcga tgcttcatac gaagaaaaaa tcatggaatt aatggctgca 240
gttgacgaat acgttccaac tccagaacgt gacactgaca aaccattcat gatgccagtc 300
gaagacgtat tctcaatcac tggacgtggt actgttgcta caggccgtgt tgaacgtgga 360
caagttcgcg ttggtgacga agttgaaatc gttggtattg ctgaagaaac tgctaaaaa 420
actgtaactg gtgttgaaat gttccgtaaa ttgttagact atgctgaagc aggggataac 480
attggtgcat tgctacgtgg tggtgctcgt gaagacatcc aacgtggaca agtattggct 540
aaagctggta caatcacacc tcatacaaaa tttaaagctg aagtttacgt ttaacaaaa 600
gaagaaggtg gacgtcatat acca
    
```

<210> 993
 <211> 756
 <212> DNA
 <213> Streptococcus pyogenes

```

<400> 993
atggaaaaca ataaaaaagt attgaagaaa atggtatattt ttgttttagt gacatttctt 60
ggactaacia tctcgcaaga ggtattttgct caacaagacc cccatccaag ccaacttcac 120
agatctagtt tagttaaaaa ccttcaaaat atatattttc tttatgaggg tgaccctggt 180
actcacgaga atgtgaaatc tgttgatcaa cttttatctc acgatttaat atataatggt 240
tcagggccaa attatgataa attaaaaact gaacttaaga accaagagat ggcaacttta 300
tttaaggata aaaacgttga tttttatggt gtagaatatt accatctctg ttatttatgt 360
gaaaatgcag aaaggagtgc atgtatctac ggaggggtaa caaatcatga agggaaatcat 420
ttagaaattc ctaaaaagat agtcgttaaa gtatcaatcg atggtatcca aagcctatca 480
tttgatattg aaacaaataa aaaaatggta actgctcaag aattagacta taaagttaga 540
aaatatctta cagataataa gcaactatat actaatggac cttctaaata tgaaactgga 600
tatataaagt tcatacctaa gaataaagaa agtttttggt ttgatttttt ccctgaacca 660
gaatttactc aatctaaata tcttatgata tataaagata atgaaacgct tgactcaaac 720
acaagccaaa ttgaagtcta cctaacaacc aagtaa
    
```

<210> 994
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 994
 tggactaaca atctcgcaag agg

23

<210> 995
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 995
 acattctcgt gagtaacagg gt

22

<210> 996
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 996
acaaatcatg aagggaatca tttag

25

<210> 997
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 997
ctaattcttg agcagttacc att

23

<210> 998
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 998
ggaggggtaa caaatcatga agg

23

<210> 999
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 999
ttgacctgt tgatgacgaa gag

23

<210> 1000
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1000
ttagtgtgtg gggtgattga act

23

<210> 1001
<211> 23

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1001
aagagttgct tgaattagtt gag

23

<210> 1002
<211> 894
<212> DNA
<213> Streptococcus pyogenes ATCC 700294

<400> 1002
aacatgatca ctggtgccgc tcaaatggac ggagctatcc ttgtagttgc ttcaactgat 60
ggaccaatgc cacaaactcg tgagcacatc cttctttcac gtcaggttgg tgtaaacac 120
cttatcgtgt tcatgaacaa agttgacctt gttgatgacg aagagttgct tgaattagtt 180
gagatggaaa ttctgtgacct tctttcagaa tacgatttcc cagggtgatga ccttccagtt 240
atccaaggtt cagctcttaa agctcttgaa ggcgacacta aatttgaaga catcatcatg 300
gaattgatgg atactgttga ttcatacatt ccagaaccag aacgcgacac tgacaaacca 360
ttgcttcttc cagtcgaaga cgtattctca attacaggtc gtggtacagt tgcttcagga 420
cgtatcgacc gtggtactgt tcgtgtcaac gacgaaatcg aaatcggttg tatcaaagaa 480
gaaactaaaa aagctggtgt tactggtggt gaaatgttcc gtaaacaact tgacgaaggt 540
cttgcaggag acaacgtagg tatecttctt cgtggtgttc aacgtgacga aatcgaacgt 600
ggccaagtta ttgctaaacc aagttcaatc aacccacaca cttaaattcaa aggtgaagta 660
tatatccttt cttaaagacga aggtggacgt cacactccat tcttcaacaa ctaccgtcca 720
caattctact tccgtacaac tgacgtaaca ggttcaatcg aacttccagc aggtacagaa 780
atggttatgc ctggtgataa cgtgacaatc aacggttgagt tgatccaccc aatcgccgta 840
gaacaaggta ctactttctc aatccgtgaa ggtggacgta ctggttggtc aggt 894

<210> 1003
<211> 332
<212> DNA
<213> Bacillus cereus ATCC 14579

<400> 1003
aatggatcct gtatatgcac aaaaattagg cgtaaacata gatgaattac tattatcaca 60
gcctgataca ggggagcaag gattagaaat cgcggaagca cttgtacgaa gtggtgcggt 120
tgacattatc gtaattgact ctgtagcagc tcttgtaccg aaagcagaga ttgaaggcga 180
catgggtgac tcacacgtag gtttacaagc acgtttaatg tcacaagcac ttcgtaaagct 240
ttcaggagca atcaacaaat caaaaacaat tgcaatcttt attaaccaaa ttcgtgaaaa 300
agttgggggt atgttcggaa acccagaaac aa 332

<210> 1004
<211> 1212
<212> DNA
<213> Streptococcus pneumoniae strain StrR-01

<400> 1004
accaagaagc tcaaaaacat ctgtgggata tctacaactc cgatcaatac gtctcttacc 60
ctgacgatga tttgcaagtc gcattctacg tcgtagatgt ttcaaatggg aaagtcacgt 120
cccaacttgg agctcgtcac caagcaagta acgtttcatt tggtaccaac caagctgtgg 180
aaaccaatcg tgactggggg tctgctatga aaccaatcac cgattatgca cctgccatag 240
aatacgggtg ttatgattcc actgcaacta tgggtaatga tattccttat aactatccgg 300
gaacaagcac acctgtctac aactgggata gagcatatct cggtaatatc actctgcaat 360
atgctcttca acaatcacga aatgtcacag ccgttgagac tccaagcatg gtcgggtctag 420
atagagctaa aaccttcctt aatgggtctg gattcgacta tccagcaagt cattatgcaa 480
acgccatttc aagtaataca acagaatcta ataaacaata cggagcaagt agtgaaaaaa 540
tggtgctgct ttagtctgcc tttgcaaatg gtggcactta ctataaacca atgtatatcc 600
ataaagtcgt cttcagtgat ggaagtaaaa aagagttctc taatgtcgga actcgtgcca 660
tgaaggaaac gacagcctat atgatgaccg acatgatgaa aacagtcctg acttatggaa 720

```

ctgggctgtg agcctatctt ccttggtctt ctcaagctgg taaaacagga acctctaact 780
atacagatga ggaagttgaa aaccacatca agaacactgg ctatgtagct ccagatgaaa 840
tggtttgttg ttatactcgt aagtattcta tggctgtatg gacagggtat tcgaatcggt 900
taactcctat cgttgagat ggtttcctag ttgcagctaa agtttatcgc tcaatgataa 960
cgtatctatc agaagatact catccagaag actggacgat gccagacgga cttttcagaa 1020
acggggaatt tgtattcaaa aatggagctc gcccaatatg gactgaaccc tctactcaac 1080
aatcctcaac agctgaaagt tcaagctcat catcagatag ttcaacttca cagtctagct 1140
caaccactcc aagcacaat aatagtagca ctaccaatcc taacaataat acgcaacaat 1200
caaatacaac cc

```

<210> 1005
 <211> 1212
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-02

```

<400> 1005
aagctcaaaa acatctgtgg gatattctaca actccgatca atacgtctct taccctgacg 60
atgatttgca agtcgcatct acggtcgtag atgtttcaaa tggtaaagtc atcgcccaac 120
ttggagctcg tcaccaagca agtaacgttt catttggtag caaccaagct gtggaaacca 180
atcgtgactg gggttctgct atgaaaccaa tcaccgatta tgcacctgcc atagaatacg 240
gtgtttatga ttccactgca actatgggta atgatattcc ttataactat cggggaacaa 300
gcacacctgt ctacaactgg gatagagcat atttcggtaa tattactctg caatatgctc 360
ttcaacaatc acgaaatgtc acagccgttg agactttgaa taaggctcgt ctatgaaag 420
ctaaaacctt ccttaatggt cttgggtatcg actatccaag catgcattat gcaaacgcca 480
tttcaagtaa tacaacagaa tctaataaac aatacggagc aagtagtgaa aaaatggctg 540
ctgcttatgc tgccctttgcc aacgggtggaa tttaccacaa acccatgtat atcaataagg 600
tcgtcttcag tgacggtagt aaaaaagaat tttcagatgt aggtacacga gctatgaaag 660
aaacaactgc ttacatgatg accgaaatga tgaaaactgt cttggcatac ggaactggct 720
gtggagccta tctcccatgg ttagcgcaag ctggttaagac aggtacttct aactacacag 780
atgatgaaat tgaaaaacac atcaagaaca ctggctatgt agctccagat gaaatggttg 840
ttggttatat tcgtaagtat tctatggctg tatggacagg ttattcgaat cgtttaactc 900
ctatcggttg agatggtttc ctatgtgcag ctaaagttta tcgctcaatg ataactgata 960
tgtctgaagg aagcaatcca gaggattgga atataccaga ggggctctac agaaatggag 1020
aattegtatt taaaaatggt gctcgttcta cgtggagctc acctgctcca caacaacccc 1080
catcaactga aagttcaagc tcatcatcag atagtccaac ttcacagtct aactcaacca 1140
ctccaagcac aaataatagt acgactacca atcctaacaa taatacgcaa caatcaataa 1200
caaccctga tc

```

<210> 1006
 <211> 1213
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-03

```

<400> 1006
accaagaagc tcaaaaacat ctgtgggata tctacaactc cgatcaatac gtctcttacc 60
ctgacgatga tttgcaagtc gcatctacgg tctagatgt ttcaaaggt aaagtcacg 120
cccaacttgg agctcgtcac caagcaagta acgtttcatt tggtagcaac caagctgttg 180
aaaccaatcg tgactgggtg tctgctatga aaccaatcac cgattatgca cctgccatag 240
aatacgggtg ttatgattcc actgcaacta tgggttaatga tattccttat aactatccgg 300
gaacaagcac acctgtctac aactgggata gagcatattt cggtaatat actctgcaat 360
atgctcttca acaatcacga aatgtcacag ccgttgagac tttgaataag gtcgggtctag 420
atagagctaa aaccttcctt aatggctctg gtatcgacta tccaagcatg cattatgcaa 480
acgccatttc aagtaataca acagaatcta ataaacaata cggagcaagt agtgaaaaaa 540
tggtgtgctg ttatgctgcc tttgccaacg gtggaattta agaatatttc agatgtaggt acacgagcta 600
ataaggctgt cttcagtgac ggtagtaaaa aagaattttc aactgtcttg gcatacgaa 720
tgaaagaaac aactgcttac atgatgaccg aaatgatgaa aactgtcttg gctactgaa 780
ctggctgctg agcttatctc ccatgggttag cgcaagctgg taagacaggt acttctaact 840
acacagatga tgaaattgaa aaacacatca agaacactgg ctatgtagct ccagatgaaa 900
tggtttgttg ttatactcgt aagtattcta tggctgtatg agtttatcgc tcaatgataa 960
taactcctat cggttgagat ggtttcctag ttgcagctaa accagagggg ctctacagaa 1020
cgtatctgtc tgaagggaagc aatccagagg attggaatat accagagggg gctccacaac 1080
atggagaatt cgtattttaa aatgggtgctc gttctacgtg gagctcacct cagtctaact 1140
aaccctcatc aactgaaagt tcaagctcat catcagatag taacaataat acgcaacaat 1200
caaccactcc aagcacaat aatagtagca ctaccaatcc

```


caaatacaac ccc

<210> 1007
<211> 1218
<212> DNA
<213> Streptococcus pneumoniae strain StrR-04

```

<400> 1007
accaagaagc tcaaaaacat ctgtgggata tctacaactc cgatcaatac gtctcttacc 60
ctgacgatga tttgcaagtc gcatctacgg tctagatgt ttcaaagggt aaagtcacgc 120
cccaacttgg agctcgtcac caagcaagta acggttcatt tggtagcaac caagctgtgg 180
aaaccaatcg tgactggggg tctgctatga aaccaatcac cgattatgca cctgccatag 240
aatacggtgt ttatgattcc actgcaacta tgggtaaatga tttccttat aactatccgg 300
gaacaagcac acctgtctac aactgggata gagcatatct cggtaaatatt actctgcaat 360
atgctcttca acaatcacga aatgtcacag ccgttgagac tttgaataag gtcgggtctag 420
atagagctaa aaccttcctt aatggctctg gtatcgacta tccaagcatg cattatgcaa 480
acgccatttc aagtaataca acagaatcta ataaacaata cggagcaagt agtgaaaaaa 540
tggtgctgctc ttatgctgcc tttgcaaatg gtggcactta ctataaacca atgtatatcc 600
ataaagtcgt cttcagtgat ggaagtaaaa aagagttctc taatgtcggg actcgtgcca 660
tgaaggaagc gacagcctat atgatgaccg acatgatgaa aacagctctg acttatggaa 720
ctgggctgtg agcctatctt ccttggcttc ctcaagctgg taaaacagga acctctaact 780
atacagatga ggaagttgaa aaccacatca agaactctg ctatgtagct ccagatgaaa 840
tggttggttg ttatactcgt aagtattcta tggctgtatg gacaggttat tcgaatcgtt 900
taactcctat cggttgagat ggtttcctag ttgcagctaa agtttatcgc tcaatgataa 960
cgtatctatc agaagatact catccagaag actggacgat gccagacgga cttttcagaa 1020
acggggaatt tgtattcaaa aatggagctc gcccaatatg gactgaaccc tctactcaac 1080
aatcctcaac agctgaaagt tcaagctcat catcagatag ttcaacttca cagtctagct 1140
caaccactcc aagcacaaat aatagtacga ctaccaatcc taacaataat acgcaacaat 1200
caaatacaac ccctgatac

```

<210> 1008
<211> 1223
<212> DNA
<213> Streptococcus pneumoniae strain StrR-05

```

<400> 1008
gtagaccaag aagctcaaaa acatctgtgg gatattctaca actccgatca atacgtctct 60
taccctgacg atgatttgca agtcgcatct acggctcgtag atgtttcaaa tggtaaagtc 120
atcgcccaac ttggagctcg tcaccaagca agtaacgttt catttggtac caaccaagct 180
gtggaaacca atcgtgactg gggttctgct atgaaaccaa tcaccgatta tgcacctgcc 240
atagaatacg gtgtttatga ttccactgca actatgggta atgatattcc ttataactat 300
ccgggaacaa gcacacctgt ctacaactgg gatagagcat atttcggtaa tattactctg 360
caatatgctc ttcaacaatc acgaaatgtc acagccgttg agactttgaa taaggctcgg 420
ctagatagag ctaaaacctt ccttaatggg cttgggtatcg actatccaag catgcattat 480
gcaaacgcca tttcaagtaa tacaacagaa tctaataaac aatacggagc aagtagtgaa 540
aaaatggctg ctgcttatgc tgcctttgca aatgggtggc cttactataa accaatgtat 600
atccataaag tcgtcttcag tgatggaagt accgacatga tgaaaacagt cttgacttat 660
gccatgaagg aaacgacagc ctatatgatg accgacatga ctggtaaaac aggaacctct 720
ggaactgggc gtggagccta tcttccttgg cttcctcaag ctgggtatgt agctccagat 780
aactatacag atgaggaagt tgaaaaccac atcaagaaca ctggctatgt agctccagat 840
gaaatgtttg ttggttatac tcgtaagtat tctatggctg tatggacagg ttattcgaat 900
cgttttaactc ctatcggttg agatggtttc ctagtgcag cttaaagtta tcgctcaatg 960
ataacgtatc tatcagaaga tactcatcca gaagactgga cgatgccaga cggacttttc 1020
agaaacgggg aatttgtatt caaaaatgga gctcgcccaa tatggactga accctctact 1080
caacaatcct caacagctga aagttcaagc tcatcatcag atagttcaac ttcacagtct 1140
agctcaacca ctccaagcac aaataatagt acgactacca atcctaacaa taatacggaa 1200
caatcaataa caaccctga tca

```

<210> 1009
<211> 1214
<212> DNA
<213> Streptococcus pneumoniae strain StrR-06

```

<400> 1009
accaagaagc tcaaaaaacat ctgtgggata tctacaactc cgatcaatac gtctctttacc 60
ctgacgatga ttttgcaagtc gcatctacgg tcgtagatgt ttcaaatggt aaagtcacgc 120
cccaacttgg agctcgtcac caagcaagta acgtttcatt tggtagcaac caagctgtgg 180
aaaccaatcg tgactggggg tctgctatga aaccaatcac cgattatgca cctgccatag 240
aatacgggtg ttatgattcc actgcaacta tgggtaaatga ttttccttat aactatccgg 300
gaacaagcac acctgtctac aactgggata gagcatatgt cggtaatatt actctgcaat 360
atgctcttca acaatcacga aatgtcacag cggtagagac tttgaataag gtcgggtctag 420
atagagctaa aaccttcctt aatgggtctg gtatcgacta tccaagcatg cattatgcaa 480
acgccatttc aagtaataca acagaatcta ataaacaata cggagcaagt agtgaaaaaa 540
tggctgctgc ttatgctgcc tttgcaaagt gtggcactta ctataaacca atgtatatcc 600
ataaagtcgt cttcagtgat ggaagtaaaa aagagttctc taatgtcggg actcgtgcca 660
tgaaggaaac gacagcctat atgatgaccg acatgatgaa aacagtcctg acttatggaa 720
ctgggcgtgg agcctatctt ccttggtctc ctcaagctgg taaaacagga acctctaact 780
atacagatga ggaagttgaa aaccacatca agaactctgg ctatgtagct ccagatgaaa 840
tggtttgttg ttatactcgt aagtattcta tggctgtatg gacaggttat tcgaatcggt 900
taactcctat cgttgagat ggtttcctag ttgcagctaa agtttatcgc tcaatgataa 960
cgtatctatc agaagatact catccagaag actggacgat gccagacgga cttttcagaa 1020
acggggaatt tgtattcaaa aatggagctc gcccaatatg gactgaaccc tctactcaac 1080
aatcctcaac agctgaaagt tcaagctcat catcagatag ttcaacttca cagtctagct 1140
caaccactcc aagcacaat aatagtagca ctaccaatcc taacaataat acgcaacaat 1200
caaatacaac ccct 1214

```

```

<210> 1010
<211> 1223
<212> DNA
<213> Streptococcus pneumoniae strain StrR-07

```

```

<400> 1010
ccaagaagct caaaaaacatc tgtgggatat ctacaactcc gatcaatacg tctctttacc 60
tgacgatgat ttgcaagtcg catctacggg cgtagatggt tcaaatggta aagtcacgc 120
acaacttggg gctcgtcatc aagcaagtaa tgtttcattc ggtaccaacc aggcgctaga 180
aaccaatcgt gactgggggat catcaatgaa accaatcact gactatgctc ccgcttttaga 240
atatggagtc tatgactcta ctgcttctat tgtacatgat gtcccttata actatcctgg 300
cactgatact ccactctaca actgggatca tgtctacttt ggaaacatta caatccagta 360
tgctcttcaa caatcacgaa atgtcacagc cgttgagact ttgaataagg tcgggtctaga 420
tagagctaaa accttcctta atgggtcttg tatcgactat ccaagcatgc attatgcaa 480
cgccatttca agtaacacaa ctgaatccaa caaaaaatat ggtgcaagta gtgaaaaaa 540
ggctgctgcc tacgctgctt ttgctaattg ttggtatttat cacaaccaa tgtatatcaa 600
taaaatcgtc tttagtgatg gtacgaaaaa agaattttct gatgctggta cacgagctat 660
gaaagagact actgcctata tgatgactga aatgatgaaa actgttttaa cttacggaac 720
aggacgtgga gcctacctac catggcttcc acaagcaggt aagacaggta cttctaacta 780
tactgacgaa gaaattgaaa agtatatcaa gaacactggg tacgtagctc cagatgaaat 840
gtttgtaggg tatacccgta aatatgcaat ggctgtttgg acaggatact caaatcgtct 900
aactccaatc atcggagatg gtttccttgg tgcgtgtaaa gtctatcggt caatgataac 960
ttacctttct gaagatgacc aacctggaga ttggacaatg ccagatgggt tgtatagaaa 1020
tggagaattc gtatttaaaa atgggtgctc ttctacgtgg agctcacctg ctccacaaca 1080
accccatca actgaaagtt caagctcatc atcagatagt tcaacttcac agtctaactc 1140
aaccactcca agcacaata atagtagcag taccaatcct aacaataata cgcaacaatc 1200
aaatacaacc cctgatcaac aaa 1223

```

```

<210> 1011
<211> 1207
<212> DNA
<213> Streptococcus pneumoniae strain StrR-08

```

```

<400> 1011
aagctcaaaa acatctgtgg gatattctaca actccgatca atacgtctct taccctgacg 60
atgatttgca agtcgcatct acggctcgtag atgtttcaaa tggtaaagtc atcgcccaac 120
ttggagctcg tcaccaagca agtaacgttt cattttggtac caaccaagct atggaaacca 180
atcgtgactg ggggttctgct atgaaaccaa tcaccgatta tgcacctgcc atagaatacg 240
gtgtttatga ttccactgca actatgggta atgatattcc ttataactat ccgggaacaa 300
gcacacctgt ctacaactgg gatagagcat atttcggtaa tattactctg caatatgctc 360
ttcaacaatc acgaaatgct acagccggtg agactttgaa taaggctcgg ctagatagag 420

```

ctaaaacctt	ccttaatggt	cttgggtatcg	actatccaag	catgcattat	gcaaacgcca	480
tttcaagtaa	tacaacagaa	tctaataaac	aatacggagc	aagtagtgaa	aaaatggctg	540
ctgcttatgc	tgccctttgca	aatgggtggca	cttactataa	accaatgtat	atccataaag	600
tcgtcttcag	tgatggaagt	aaaaaagagt	tctctaattgt	cggaactcgt	gccatgaagg	660
aaacgacagc	ctatatgatg	accgacatga	tgaaaaacagt	cttgacttat	ggaactgggc	720
gtggagccta	tcttccttgg	cttcctcaag	ctggtaaaac	aggaacctct	aactatacag	780
atgaggaagt	tgaaaaccac	atcaagaaca	ctggctatgt	agctccagat	gaaatgtttg	840
ttgggttatac	tcgtaagtat	tctatggctg	tatggacagg	ttattcgaat	cgtttaactc	900
ctatcgttgg	agatgggttc	ctagttgcag	ctaaagttta	tcgctcaatg	ataacgtatc	960
tatcagaaga	tactcatcca	gaagactgga	cgatgccaga	cggacttttc	agaaacgggg	1020
aatttgtatt	caaaaatgga	gctcgcccaa	tatggactga	accctctact	caacaatcct	1080
caacagctga	aagttcaagc	tcatcatcag	atagttcaac	ttcacagtct	agctcaacca	1140
ctccaagcac	aaataatagt	acgactacca	atcctaacaa	taatacgcaa	caatcaaata	1200
caacccc						1207

<210> 1012
 <211> 1201
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-09

<400> 1012						
aagctcaaaa	acatctgtgg	gatatctaca	actccgatca	atacgtctct	taccctgacg	60
atgatttgca	agtcgcatct	acggtcgtag	atgtttcaaa	tggttaaagtc	atcgcccaac	120
ttggagctcg	tcaccaagca	agtaacgttt	catttgggtac	caaccaagct	gtggaaacca	180
atcgtgactg	gggttctgct	atgaaaccaa	tcaccgatta	tgacactgcc	atagaatacg	240
gtgtttatga	ttccactgca	actatggtta	atgatattcc	ttataactat	ccgggaacaa	300
gcacacctgt	ctacaactgg	gatagagcat	atttcggtaa	tattactctg	caatatgctc	360
ttcaacaatc	acgaaatgtc	acagccggtg	agactttgaa	taaggctcgg	ctagatagag	420
ctaaaacctt	ccttaatggt	cttgggtatcg	actatccaag	catgcattat	gcaaacgcca	480
tttcaagtaa	tacaacagaa	tctaataaac	aatacggagc	aagtagtgaa	aaaatggctg	540
ctgcttatgc	tgccctttgcc	aacgggtggaa	tttaccacaa	acccatgtat	atcaataagg	600
tcgtcttcag	tgacggtagt	aaaaaagaat	tttcagatgt	aggtacacga	gctatgaaag	660
aaacaactgc	ttacatgatg	accgaaatga	tgaaaactgt	cttggcatac	ggaactgggtc	720
gtggagccta	tctcccatgg	ttagcgcaag	ctggtaagac	aggtacttct	aactacacag	780
atgatgaaat	tgaaaaacac	atcaagaaca	ctggctatgt	agctccagat	gaaatgtttg	840
ttgggttatac	tcgtaagtat	tctatggctg	tatggacagg	ttattcgaat	cgtttaactc	900
ctatcgttgg	agatgggttc	ctagttgcag	ctaaagttta	tcgctcaatg	ataacgtatc	960
tatcagaaga	tactcatcca	gaagactgga	cgatgccaga	cggacttttc	agaaacgggg	1020
aatttgtatt	caaaaatgga	gctcgttcta	cgtggaactc	acctgctcca	caacaacccc	1080
catcaactga	aagttcaagc	tcatcatcag	atagttcaac	ttcacagtct	agctcaacca	1140
ctccaagcac	aaataatagt	acgactaccg	atcctaacaa	taatacgcaa	caatcaaata	1200
c						1201

<210> 1013
 <211> 1220
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-10

<400> 1013						
tgtagaccaa	gaagctcaaa	aacatctgtg	ggatatctac	aactccgata	aatacgtctc	60
ttaccctgac	gatgatttgc	aagtcgcata	tacggtcgta	gatgtttcaa	atggtaaagt	120
catcgcacaa	cttggtgctc	gtcatcaagc	aagtaatggt	tcattcggta	ccaaccaggc	180
cgtagaaaac	aatcgtgact	ggggatcata	aatgaaacca	atcactgact	atgctcccgc	240
tttagaatat	ggagtctatg	actctactgc	ttctattgta	catgatgtcc	cttataacta	300
tcctggcact	gatactccac	tctacaactg	ggatcatgtc	tactttggaa	acattacaat	360
ccagtatgct	cttcaacaat	cacgaaatgt	cacagccggt	gagactttga	ataaggtcgg	420
tctagataga	gctaaaacct	tccttaatgg	tcttggatgc	gactatccaa	gcattgcatta	480
tgcaaacgcc	atttcaagta	acacaactga	atccaacaaa	aaatatgggtg	caagtagtga	540
aaaaatggct	gctgcctacg	ctgcttttgc	taatgggtgg	atttatcaca	aaccaatgta	600
tatcaataaa	atcgtcttta	gtgatggtag	cgaaaaagaa	ttttctgatg	ctgggtacacg	660
agctatgaaa	gagactactg	cctatatgat	gactgaaatg	atgaaaactg	ttttaactta	720
cggaacagga	cgtggagcct	acctaccatg	gcttccacaa	gcaggtaaga	caggactctc	780
taactatact	gacgaagaaa	ttgaaaagta	tatcaagaac	actggctacg	tagctccaga	840
tgaaatgttt	gtgggttata	ctcgtaagta	ttctatggct	gtatggacag	gttattcgaa	900

tcgtttaact	cctatcggtg	gagatgggtt	cctagttgca	gctaaagttt	atcgctctat	960
gatgacctac	ctgtctgaag	gaagcaatcc	agaggattgg	aatataccag	aggggctcta	1020
cagaaatgga	gaattcgat	ttaaaaatgg	tgctcggtct	acgtggagct	cacctgctcc	1080
acaacaaccc	ccatcaactg	aaagttcaag	ctcatcatca	gatagttcaa	cttcacagtc	1140
tagctcaacc	actccaagca	caaataatag	tacgactacc	aatcctaaca	ataatacgca	1200
acaatcaaat	acaaccctg					1220

<210> 1014

<211> 1199

<212> DNA

<213> Streptococcus pneumoniae strain StrR-11

<400> 1014

caaaaacatc	tgtgggatat	ttacaatata	gacgaatacg	ttgcctatcc	agacgatgaa	60
ttgcaagtcg	cttctacat	tgttgatggt	tctaacggta	aagtcattgc	ccagctagga	120
gcacgcatc	agtcaagtaa	tgtttccttc	ggaattaacc	aagcagtaga	aacaaaccgc	180
gactggggat	caactatgaa	accgatcaca	gactatgctc	ctgccttggg	gtacggtgtc	240
tacgattcaa	ctgctactat	cgttcacgat	gagccctata	actaccctgg	gacaaatacc	300
cctgtttata	actgggatag	gggctacttt	ggcaacatca	ccttgcaata	cgccctgcaa	360
caatcgcgaa	acgtcccagc	cgtaggaaact	ctaacaagg	tcggactcaa	ccgcgccaag	420
actttcttaa	atggtctcgg	aatcgactac	ccaagtattc	actactcaaa	tgccatttca	480
agtaacacaa	ccgaatcaga	caaaaaatat	ggagcaagta	gtgaaaagat	ggctgctgct	540
tacgctgcct	ttgcaaattg	tggaaacttac	tataaaccaa	tgtatatcca	taaagtcgct	600
tttagtgatg	ggagtgaata	agagttctct	aatgtcggaa	ctcgtgccat	gaaggaaacg	660
acagcctata	tgatgaccga	catgatgaaa	actgtcttag	tatacgggat	cggacgtgga	720
gcctacctac	cttggcttcc	acaagcaggt	aaaacaggta	cttctaacta	tactgacgaa	780
gaaattgaaa	agtatatcaa	gaacactggt	tacgtagctc	cagatgaaat	gtttgtaggg	840
tatacccgca	aatatgcaat	ggctgtatgg	acaggtctat	ctaaccgtct	gacaccactt	900
gtaggcgatg	gccttacggg	cgctgctaaa	gtttaccgct	ctatgatgac	ctacctgtct	960
gaaggaagca	atccagagga	ttggaatata	ccagaggggc	tctacagaaa	tggagaattc	1020
gtatttataa	atggtgctcg	ttctacgtgg	aactcacctg	ctccacaaca	acccccatca	1080
actgaaagtt	caagctcatc	atcagatagt	tcaacttcac	agtctagctc	aaccactcca	1140
agcacaaaata	atagtacgac	taccaatcct	aacaataata	cgcaacaatc	aaataacaac	1199

<210> 1015

<211> 1211

<212> DNA

<213> Streptococcus pneumoniae strain StrR-12

<400> 1015

aagctcaaaa	acatctgtgg	gatattctaca	actccgatca	atacgtctct	taccctgacg	60
atgatttgca	agtcgcatct	acggctcgtag	atgtttcaaa	tggtaaagtc	atcgcccaac	120
ttggagctcg	tcaccaagca	agtaacgttt	catttggtac	caaccaagct	gtggaaacca	180
atcgtgactg	gggttctgct	atgaaaccaa	tcaccgatta	tgcacctgcc	atagaatacg	240
gtgtttatga	ttccactgca	actatgggta	atgatattcc	ttataactat	ccgggaacaa	300
gcacacctgt	ctacaactgg	gatagagcat	atttcggtaa	tattactctg	caatatgctc	360
ttcaacaatc	acgaaatgtc	acagccggtg	agactttgaa	taagggtcgg	ctagatagag	420
ctaaaacctt	ccttaattgg	cttgggtatcg	actatccaag	catgcattat	gcaaacgcca	480
tttcaagtaa	tacaacagaa	tctaataaac	aatacggagc	aagtagtgaa	aaaatggctg	540
ctgcttatgc	tgccctttgcc	aacgggtggaa	tttaccacaa	acccatgtat	atcaataagg	600
tcgtcttcag	tgacggtagt	aaaaaagaat	tttcagatgt	aggtacacga	gctatgaaag	660
aaacaactgc	ttacatgatg	accgaaatga	tgaaaactgt	cttggcatac	ggaactgggc	720
gtggagccta	tctcccatgg	ttagcgcaag	ctggtaagac	aggtacttct	aactacacag	780
atgatgaaat	tgaaaaacac	atcaagaaca	ctggctatgt	agctccagat	gaaatgtttg	840
ttgggtatac	tcgtaagtat	tctatggctg	tatggacagg	ttattcgaat	cgtttaactc	900
ctatcggttg	agatgggttc	ctagttgcag	ctaaagttta	tcgctcaatg	ataacgtatc	960
tgtctgaagg	aagcaatcca	gaggattgga	atataccaga	ggggctctac	agaaatggag	1020
aattcgattt	taaaaatggg	gctcggttcta	cgtggagctc	acctgctcca	caacaacccc	1080
catcaactga	aagttcaagc	tcatcatcag	atagttcaac	ttcacagtct	aactcaacca	1140
ctccaagcac	aaataatagt	acgactacca	atcctaacaa	taatacgcaa	caatcaataa	1200
caaccctgta	t					1211

<210> 1016

<211> 1222
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-13

<400> 1016
 gtagaccaag aagctcaaaa acatctgtgg gatattctaca actccgatca atacgtctct 60
 taccctgacg atgattttgca agtcgcatct acggtcgtag atgttttcaaa tggtaaagtc 120
 atcgcacaaac ttggtgctcg tcatcaagca agtaaatgttt cattcggtac caaccaggcc 180
 gtagaaacca atcgtgactg gggatcatca atgaaaccaa tcaactgacta tgctcccgt 240
 ttagaatatg gagtctatga ctctactgct tctattgtac atgatgtccc ttataactat 300
 cctggcactg atactccact ctacaactgg gatcatgtct acttttgaaa cattacaatc 360
 cagtatgctc ttcaacaatc acgaaatgtc acagccgttg agactttgaa taaggtcggt 420
 ctagatagag ctaaaacctt ccttaatggg cttgggtatcg actatccaag catgcattat 480
 gcaaacgcca tttcaagtaa cacaactgaa tccaacaaaa aatatggtgc aagtagtgaa 540
 aaaatggctg ctgcctacgc tgctttttgct aatgggtggta tttatcacia accaatgtat 600
 atcaataaaa tcgctctttag tgatggtagc gaaaaagaat tttctgatgc tggtaacaga 660
 gctatgaaag agactactgc ctatatgatg actgaaatga tgaaaactgt ttaacttac 720
 ggaacaggac gtggagccta cctaccatgg cttccacaag caggtaagac aggtacttct 780
 aactatactg acgaagaaat tgaaaagtat atcaagaaca ctggctacgt agctccagat 840
 gaaatgtttg tgggttatac tcgtaagtat tctatggctg tatggacagg ttattcgaat 900
 cgtttaactc ctatcgttgg agatggtttc ctatgtgcag ctaaaagtta tcgctctatg 960
 atgacctacc tgtctgaagg aagcaatcca gaggtaatga atataccaga ggggctctac 1020
 agaaatggag aattcgtatt taaaaatggg gctcgttcta cgtggagctc acctgctcca 1080
 caacaacccc catcaactga aagttcaagc tcatcatcag atagttcaac ttcacagtct 1140
 agctcaacca ctccaagcac aaataatagt acgactacca atcctaacaa taatacgcaa 1200
 caatcaaata caaccctga tc 1222

<210> 1017
 <211> 1229
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-14

<400> 1017
 tgtagacca gaagctcaaa aacatctgtg ggatatttac aatacagacg aatacgttgc 60
 ctatccagac gatgaattgc aagtcgcttc taccattggt gatgtttcta acggtaaagt 120
 cattgcccag ctaggagcac gccatcagtc aagtaatggt tccttcggaa ttaaccaagc 180
 agtagaaaca aaccgcgact ggggatcaac tatgaaaccg atcacagact atgctcctgc 240
 cttggagtac ggtgtctacg attcaactgc tactatcggt cagcatgagc cctataacta 300
 ccctgggaca aatacccttg tttataactg ggaatggggc tactttggca acatcacctt 360
 gcaatacgcg ctgcaacaat cgcgaaacgt ccagccgtg gaaactctaa acaaggtcgg 420
 actcaaccgc gccaaagact tcctaaatgg tctcggaatc gactacccaa gtattcacta 480
 ctcaaagtgc atttcaagta acacaaccga atcagacaaa aaatatggag caagtagtga 540
 aaagatggct gctgcttacg ctgccttttg aaatgggtgga acttactata aaccaatgta 600
 tatccataaa gtctcttcta gtgatgggag tgaaaaagag ttctctaagt tcggaactcg 660
 tgccatgaaa gaaacaactg cttacatgat gaccgaaatg atgaaaactg tcctggcata 720
 cggaagtggg cgtggagcct atctcccatg gttagcgcaa gctggtaaga caggtaactt 780
 taactacaca gatgatgaaa ttgaaaaaca catcaagaac actggctatg tagctccaga 840
 tgaaatgttt gttgggtata ctcgtaagta ttctatggct gtatggacag gttattcgaa 900
 tcgtttaact cctatcgttg gagatgggtt cctagttgca gctaaaagtt atcgctcaat 960
 gataacgtat ctatcaaaa atactcatcc agaagactgg acgatgccag acggactttt 1020
 cagaaacggg gaatttgtat tcaaaaatgg agctcgttct acgtggaact cacctgctcc 1080
 acaacaaccc ccatcaactg aaagttcaag ctcatcatca gatagttcaa cttcacagtc 1140
 taactcaacc actccaagca caaataatag tacgactacc aatcctaaca ataatacgca 1200
 acaatcaaat acaaccctg atcaacaaa 1229

<210> 1018
 <211> 1225
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-15

<400> 1018
 atgtagacca agaggctcaa aaacgtctgt gggatatcta caactccgat caatacgtct 60
 cttaccctga cgatgatttg caagtcgcat ctacggctcg ataggtttca aatggtaaag 120
 tcatcgccca acttgagact cgtcaccaag caagtaacgt ttcatttggt accaaccaag 180

```

ctgtggaaac caaccgtgac tggggatcaa gcatgaaacc aatcactgat tatgccccag 240
ccttagaata tgggtgtatat gattccactg caactatggt taatgatatt ccttataact 300
atccgggcac aagcacacct gtctacaact gggatcgagc atattttggt aatattagcc 360
tgcaatatgc ccttcaacaa tctcgtaacg tgccctgccgt tgaaacacta aacaagggtg 420
gttttagatag agccaaaact ttcctaaatg gtttggaat tgactatcca agtattcact 480
actcaaatgc tatttcaagt aatacaactg aatctagtaa acagtacggg gcaagcagtg 540
agaaaatggc tgcggcttac gctgcattcg ctaatggcgg tatttaccac aaaccaatgt 600
acatcaataa agttgtcttt agtcatggta gcgaaaaaga attttctgat gctggtacac 660
gagctatgaa agagactact gcctatatga tgactgaaat gatgaaaact gttttaactt 720
acggaacagg acgtggagcc tacctaccat ggcttcacca agcaggtaag acaggtactt 780
ctaactatac tgacgacgaa attgaaaagt atatcaagaa cactggctac gtagctccag 840
atgaaatggt tgtgggttat actcgtaagt attctatggc tgtatggact ggatactcaa 900
atcgtttaac tccaatcatt ggagatgggt tcctagttgc tgccaaagtt tatcgctcaa 960
tgatatcgta tctatcagaa gatgaccatc ctggagattg gacaatgcct gagggagtat 1020
acagaagtgg agaattcgta tttaaaaatg gtgctcgctt tacgtggagc tcccctgctc 1080
cacaacaacc cccatcaact gaaagttcaa gctcatcatc agatagttca acttcacagt 1140
ctagcttaac cactccaagc acaataata gtacgactac caatcctaac aacaatacgc 1200
aacaatcaaa tacaaccctt gatca 1225

```

<210> 1019

<211> 1439

<212> DNA

<213> Streptococcus pneumoniae strain StrR-01

<400> 1019

```

gcctctatatt caaaggagat gcctggcatt agtattttcta cttcttggga tcgaaagggt 60
ttggaacttt cccctttcttc tatagtaggg agtgtatcca gtgaaaaagc tgggtctcca 120
gcggaagaag cagaatccta tcttaaaaaa ggctattctc taaatgaccg tgttggaacc 180
tcctatttgg aaaagcaata tgaagagacc ttacaaggaa aacgctcggt aaaagaaatc 240
catctggata aatatggcaa tatggaaagc gtggacacaa ttgaggaagg tagtaaggga 300
aacaatatca aactgacat tgatttggcc ttccaagata gcgtggatgc tttgctgaaa 360
agttatttca attccgagct aggaaatggg ggagctaaat attctgaagg tgtctatgca 420
gtcgccctta acccaaaaac aggtgctgtt ttatccatgt cagggatcaa acatgacctg 480
aaaacgggag agttgactcc tgattccttg ggaacggtaa ccaatgtctt tgtcccagggt 540
tcggttgtca aggctgcgac catcagctca ggttgggaaa atggtgtttt atcaggaaac 600
caaaccctta cagatcagcc tattgttttc caaggttcag ctccaattta ttcttgggat 660
aaattggcat atggatcttt tcctattaca gctgtggaag ccttggagta ttcatccaat 720
gcttacatgg ttcaaaccgc tcttggaaatc atggggcaga cctatcaacc aaatatgttt 780
gttggaacca gcaatttggg aacagctatg ggaaaaactt gtgcgacctt tggcgaatat 840
ggcttggggg ctgcgaccgg aattgacctt ccagatgaat ctactggatt tgttcccaaa 900
gagtatagct ttgctaatta catcaccaat tcctttgggc agtttgataa ctatacgccc 960
atcgagttgg ctcatgtatg agcaactatt gcaaataatg gtgttcgtgt ggctcctcgt 1020
attggtgaag gcatttatgg taataatgat aagggtcaat atatccgact cggatagtag gatcagcaa 1080
ctgcaaccga cagagatgaa taagggtcaat atatccgact ccgatatgag catcttgcac 1140
caagggtttt atcagggttg ccattgggtact agtggattga caactggacg tgccttttca 1200
aatggtgcct tggatatccat tagcggaaaa acaggtacag ccgaaagcta tgtggcagat 1260
ggtcagcaag caaccaatac caatgcgggtg gcctatgccc catctgataa tcccctgctc 1320
gctgtcgag tgggtctttcc tcataatacc aatctaacaa atgggtgtagg accttccatt 1380
gcgctgaca ttatcaatct gtatcaaaaa taccatccaa tgaactagaa aggaaatta 1439

```

<210> 1020

<211> 1441

<212> DNA

<213> Streptococcus pneumoniae strain StrR-02

<400> 1020

```

gcctctatatt caaaggagat gcctggcatt agtattttcta cttcttggga tcgaaagggt 60
ttggaacttt cccctttcttc tatagtaggg agtgtatcca gtgaaaaagc tgggtctcca 120
gcggaagaag cagaatccta tcttaaaaaa ggctattctc taaatgaccg tgttggaacc 180
tcctatttgg aaaagcaata tgaagagacc ttacaaggaa aacgctcggt aaaagaaatc 240
catctggata aatatggcaa tatggaaagc gtggacacaa ttgaggaagg tagtaaggga 300
aacaatatca aactgacat tgatttggcc ttccaagata gcgtggatgc tttgctgaaa 360
agttatttca attccgagct aggaaatggg ggagctaaat attctgaagg tgtctatgca 420
gtcgccctta acccaaaaac aggtgctgtt ttatccatgt cagggatcaa acatgacctg 480

```

```

aaaacgggag agttgactcc tgattccttg ggaacggtaa ccaatgtctt tgtcccagg 540
tcggttgta aggctgcgac catcagctca gggtgggaaa atgggtgttt atcaggaaac 600
caaaccttaa cagatcagcc tattgttttc caaggttcag ctccaattta ttcttggtat 660
aaattggcat atggatcttt tcctattaca gctgtggaag ccttgaggta ttcattccaa 720
gcttacatgg ttcaaaccgc tcttggaatc atgggccaga cctatcaacc aaatatgttt 780
gttggaacca gcaatttgga aacagctatg ggaaaacttc gtgcgacctt tggcgaatat 840
ggcttggggg ctgcgaccgg aattgaccta ccagatgaat ctactggatt tgttcccaaa 900
gagtatagct ttgctaatta catcaccaat tcctttgggc agtttgataa ctatacgccc 960
atgcagttgg ctgagtatgt agcaactatt gcaaataatg gtgttcgtgt ggctcctcgt 1020
attgttgaag gcatttatgg taataatgat aaggaggagc tgggtgactt gattcagcaa 1080
ctgcaaccga cagagatgaa taaggatcat atatccgact ccgatatgag catcttgac 1140
caagggtttt atcagggttg ccatgggtact agtggattga caactggacg tgccttttca 1200
aatgggtgct tgggtatccat tagcggaaaa acagggtacg ccgaaagcta tgtggcagat 1260
ggtcagcaag caaccaatac caatgcggtg gcctatgccc catctgataa tccccaaatc 1320
gctgtcgag tgggtctttcc tcataatacc aatctaacaa atgggtgtagg accttcatt 1380
gcgcgtgaca ttatcaatct gtatcaaaaa taccatccaa tgaactagaa aggaaattat 1441
g

```

<210> 1021
 <211> 1396
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-03

```

<400> 1021
tattgcctct atttcaaagg agatgcctgg cattagatatt tctacttctt gggatcgaaa 60
gggttttgaa acttcccttt cttctatagt agggagtgtt tccagtgaat aagctgggtc 120
cccagcggaa gaagcagaat cctatcttaa aaaaggctat tctctaaatg accgtgttgg 180
aacctcctat ttggaaaagc aatatgaaga gaccttacia ggaaaacgct cggtaaaaga 240
aatccatctg gataaatatg gcaatatgga aagcgtggac acaattgagg aaggtagtaa 300
gggaaaacaat atcaaactga ccattgattt ggcccttcaa gatagcgtgg atgctttgct 360
gaaaagttat ttcaattccg agctaggaaa tgggtggagc aaatattctg aagggtgtct 420
tgcatcgccc cttaaccccaa aaacaggtgc tgttttatcc atgtcaggga tcaaaccatg 480
cctgaaaacg ggagagtgtg ctctcgattc cttgggaacg gtaaccaatg tctttgtccc 540
aggttcgggt gtcaaggctg cgaccatcag ctcaagggtg gaaaatgggt ttttatcagg 600
aaaccaaacc ttaacagatc agcctattgt ttccaagggt tcagctccaa tttattcttg 660
gtataaattg gcatatggat cttttcctat tacagctgtg gaagccttgg agtattcatc 720
caatgcttac atggttcaaa ccgctcttgg aatcatgggc cagacctatc aaccaaatat 780
gtttgttgga accagcaatt tggaaacagc tatgggaaaa cctaccagat gaatctactg gatttggtcc 840
atatggcttg ggggctgcga ccggaattga cctaccagat gggcagtttg ataactatac 960
caaagagtat agcttttgta attacatcac tattgcaaat aatgggtgtc gtgtgggtcc 1020
gcccagcag ttggctcagt atgtagcaac tattgcaaat ggactgggtg acttgattca 1080
tcgtattgtt gaaggcattt atggtaataa tgataaggga gactccgata tgagcatctt 1140
gcaactgcaa ccgacagaga tgaataaggt tactagtgtg ttgacaactg gacgtgcctt 1200
gcaccaagggt ttttatcagg ttgcccattg ttaggtatgg aacagccgaa gctatgtggc 1260
ttcaaagtgt gccttggtat ccattagcgg aaaaacaggt acagccgaaa ataatcccca 1320
agatgggtcag caagcaacca ataccaatgc ggtggcctat gcccacatct taggaccttc 1380
aatcgctgtc gcagtgggtc ttctcataa taccaatcta acaaattgggt taggaccttc 1396
cattgcgcgt gacatt

```

<210> 1022
 <211> 1428
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-04

```

<400> 1022
aaaggagatg cctggcatta gtatttctac ttcttgggat cgaaagggtt tggaaacttc 60
cctttcttct atagtaggga gtgtatccag tgaaaaagct ggtctcccag cggaagaagc 120
agaatcctat cttaaaaaag gctattctct aaatgaccgt gttggaacct cctatttgga 180
aaagcaatat gaagagacct tacaaggaaa acgctcggta aaagaaatcc atctggataa 240
atatggcaat atggaaagcg tggacacaaat tgaggaaggt agtaagggaa acaatatcaa 300
actgaccatt gatttggcct tccaagatag ctgggatgct ttgctgaaaa gttatttcaa 360
ttccgagcta ggaaatgggt gagctaaata ttctgaagggt gtctatgcag tcgcccttaa 420
cccaaaaaaca ggtgtgtgtt tatccatgtc agggatcaaa catgacctga aaacgggaga 480
gttgactcct gattccttgg gaacggtaac caatgtcttt gtcccagggt cggttgtcaa 540

```

```

ggctgcgacc atcagctcag gttgggaaaa tgggtgtttta tcaggaaacc aaaccttaac 600
agatcagcct attgttttcc aagggttcagc tccaatttat tcttggtata aattggcata 660
tgatctttt cctattacag ctgtggaagc cttggagtat tcatccaatg cttacatggg 720
tcaaaccgct cttggaatca tgggccagac ctatcaacca aatatgtttg ttggaaccag 780
caatttgga acagctatgg gaaaacttcg tgcgaccttt ggcgaaatag gcttgggggc 840
tgcgaccgga attgacctac cagatgaatc tactggattt gttcccaaag agtatagctt 900
tgctaattac atcaccaatt cctttgggca gtttgataac tatacgccca tgcagtggc 960
tcagtatgta gcaactattg caaataatgg ttttcgtgtg gctcctcgta ttgttgaagg 1020
catttatggg aataatgata agggaggact ggggtgacttg attcagcaac tgcaaccgac 1080
agagatgaat aagggtcaata tatccgactc cgatatgagc atcttgacc aaggttttta 1140
tcagggtgac catggtacta gtggattgac aactggacgt gccttttcaa atgggtgcctt 1200
ggatccatt agcggaaaaa caggtacagc cgaaagctat gtggcagatg gtcagcaagc 1260
aaccaatacc aatgcggtgg cctatgcccc atctgataat ccccaaactc ctgtcgagc 1320
ggcttttct cataatacca atctaacaaa tgggttagga ccttccattg cgcgtgacat 1380
tatcaatctg tatcaaaaat accatccaat gaactagaaa ggaaatta 1428

```

<210> 1023

<211> 1442

<212> DNA

<213> Streptococcus pneumoniae strain StrR-05

<400> 1023

```

tgcctctatt tcaaaggaga tgcctggcat tagtatttct acttcttggg atcgaaagggt 60
tttgaaact tcccttttct ctatagtagg gagtgtatcc agtgaaaaag ctggtctccc 120
agcggaagaa gcagaatcct atcttaaaaa aggctattct ctaaatgacc gtgttggaac 180
ctcctatttg gaaaagcaat atgaagagac cttacaagga aaacgctcgg taaaagaaat 240
ccatctggat aaatatggca atatggaaag cgtggacaca attgaggaag gtagtaaggg 300
aaacaatatc aaactgacca ttgatttggc cttccaagat agcgtggatg ctttgctgaa 360
aagttatttc aattccgagc taggaaatgg tggagctaaa tattctgaag gtgtctatgc 420
agtcgcccc t aacccaaaaa cagggtgctgt tttatccatg tcagggatca aacatgacct 480
gaaaacggga gagttgactc ctgattcctt gggaacggta accaatgtct ttgtcccagg 540
ttcggttgtc aaggctgcga ccatcagctc aggttgggaa aatgggtgtt tatcaggaaa 600
ccaaacctta acagatcagc ctattgtttt ccaaggttca gctccaattt attcttggt 660
taaattggca tatggatctt ttctattac agctgtggaa gccttggagt attcatccaa 720
tgcttacatg gttcaaaccg ctcttggaa catgggccag acctatcaac caaatatgtt 780
tggttggaac agcaatttgg aaacagctat gggaaaaact cgtgcgacct ttggcgaaata 840
tggttgggg gctgcgaccg gaattgacct accagatgaa tctactggat ttgttcccaa 900
agagtatagc tttgctaatt acatcaccaa ttcctttggg cagtttgata actatacgcc 960
catgcagttg gctcagtatg tagcaactat tgcaataat ggtgttcgtg tggctcctcg 1020
tattgttgaa ggcatttatg gtaataatga taaggaggga ctgggtgact tgattcagca 1080
actgcaaccg acagagatga ataaggtcaa tatatccgac tccgatatga gcattcttga 1140
ccaaggtttt tatcaggttg ccatgggtac tagtggattg acaactggac gtgccttttc 1200
aaatggtgcc ttggtatcca ttagcggaaa aacaggtaca gccgaaagct atgtggcaga 1260
tggtcagcaa gcaaccaata ccaatgcggt ggcctatgcc ccatctgata atcccaaat 1320
cgctgtcgca gtggtctttc ctcataatac caatctaaca aatgggtgtg gaccttccat 1380
tgcgcgtagc attatcaatc tgtatcaaaa ataccatcca atgaactaga aaggaaatta 1440
tg

```

<210> 1024

<211> 1445

<212> DNA

<213> Streptococcus pneumoniae strain StrR-06

<400> 1024

```

ttgcctctat ttcaaaggag atgcctggca ttagtatttc tacttcttgg gatcgaaagg 60
ttttgaaac ttccctttct tctatagtag ggagtgtatc cagtgaaaaa gctgggtctcc 120
cagcgaaga agcagaatcc tatcttaaaa aaggctattc tctaaatgac cgtgttgga 180
cctcctattt ggaaaagcaa tatgaagaga cttacaagg aaaacgctcg gtaaaagaaa 240
tccatctgga taaatatggc aatatggaaa gcgtggacac aattgaggaa ggtagtgaag 300
gaaacaatat caaactgacc attgatttgg cttccaaga tagcgtggat gctttgctga 360
aaagttattt caattccgag ctaggaaatg ctggagctaa atattctgaa ggtgtctatg 420
cagtcgcccc taacccaaaa acaggtgctg ttttatccat gtcagggatc aaacatgacc 480
tgaaaacggg agagttgact cctgattcct tgggaacggt aaccaatgtc tttgtcccag 540
gttcggttgt caaggctgag accatcagct cagggttgga aatgggtgtt ttatcaggaa 600

```



```
accaaaccctt aacagatcag cctattgttt tccaagggttc agctccaatt tattcttggt 660
ataaattggc atattgatct tttcctatta cagctgtgga agccttggag tattcatcca 720
atgcttacat gggtcaaacc gctcttgga tcatgggcca gacctatcaa ccaaatatgt 780
ttgttggaa cagcaatttg gaaacagcta tgggaaaact tcgtgcgacc tttggcgaat 840
atggcttggg ggctgcgacc ggaattgacc taccagatga atctactgga tttgttccca 900
aagagtatag ctttgcta atacatcacca attcctttgg gcagtttgat aactatacac 960
ccatgcagtt ggctcagtat gtagcaacta ttgcaaataa tgggtgtcgt gtggctcctc 1020
gtattgttga aggcatttat ggtaataatg ataaggagg actgggtgac ttgattcagc 1080
aactgcaacc gacagagatg aataagggtca atatatccga ctccgatatg agcatcttgc 1140
accaagggtt ttatcagggt gcccatggta ctagtggatt gacaactgga cgtgcctttt 1200
caaagtgtgc cttgggtatcc attagcggaa aaacagggtac agccgaaagc tatgtggcag 1260
atggctcagca agcaaccaat accaatgcgg tggcctatgc cccatctgat aatcccaaaa 1320
tcgtctgcgc agtggtcttt cctcataata ccaatctaac aaatggtgta ggaccttcca 1380
ttgctgcgtga cattatcaat ctgtatcaaa aataccatcc aatgaactag aaaggaaatt 1440
atgct
```

<210> 1025
<211> 1441
<212> DNA
<213> Streptococcus pneumoniae strain StrR-07

```
<400> 1025
ttgcctctat ttcaaaggag atgcctggca ttagtatttc tacttcttgg gatcgaaaga 60
ttttggaaac ttccctttct tctatagtag ggagtgtatc cagtgaataa gctgggtctc 120
cagcggaaag agcagaatcc tatcttaaaa aaggctattc tctaaatgac cgtgttgga 180
cctcgtattt ggaaaagcaa tatgaagaga cttacaagg aaaacgctcg gtaaaagaaa 240
tccatctgga taaatatggc aatatggaaa gcgtggacac aattgaggaa ggtagtaagg 300
gaaacaatat caaactgacc attgatttgg cttccaaga tagcgtggat gctttgctga 360
aaagttattt caattccgag ctaggaaatg gtggagccaa gtattctgag ggtgtgtatg 420
cagtcgccct taaccccaaa acaggtgctg ttttgtctat gtcaggactc aaacatgacc 480
tgaaaacggg agagttgact cctgattcct tgggaacggt aaccaatgtc tttgtcccag 540
gttcgggttg caaggtgctg accatcagct ctggctggga aaatggtgtt ttatcaggaa 600
accaaaccct aacagatcag cctattgttt tccaagggtc agctccaatt tattcttggt 660
ataaattggc atattgatct tttcctatta cagctgtgga agccttggag tattcatcca 720
atgcttacat gggtcaaacc gctcttgga tcatgggcca gacctatcaa ccaaatatgt 780
ttgttggaa cagcaatttg gaaacagcta tgggaaaact tcgtgcgacc tttggcgaat 840
atggcttggg ggctgcgacc ggaattgacc taccagatga atctactgga tttgttccca 900
aagactatag ctttgcta atacatcacca atgcctttgg gcagtttgat aactatacac 960
ccatgcagtt ggctcagtat gtagcaacta ttgcaaataa tgggtgtcgt gtggctcctc 1020
gtattgttga aggcatttat ggtaataatg ataaggagg actgggtgac ttgattcagc 1080
aactgcaacc gacagagatg aataagggtca atatatccga ctccgatatg agtatcttgc 1140
accaaggatt ttaccaagta tcgcatggaa ctagtccctc tacgacagga cgggcgtttt 1200
cagatggcgc cactgtttct atcagtggtg agaccgggtac aggtgaaagc tatgtagctg 1260
gtggtcaaga agctaataat accaatgcgg tggcctatgc tccaacagaa aatcctcaa 1320
ttgcagttgc agtagtcttt cctcataata ccaatttaac caaaaatgtt gggccagcaa 1380
ttgctcgcga cattatcaat ttatataacc aacaccatcc aatgaattag aaaggaaagc 1440
a
```

<210> 1026
<211> 1443
<212> DNA
<213> Streptococcus pneumoniae strain StrR-08

```
<400> 1026
tattgcctct atttcaaagg agatgcctgg cattagttat tctacttctt gggatcgaaa 60
gggttttgga acttcccttt cttctatagt agggagtgtg tccagtgaag aagctgggtc 120
cccagcggaa gaagcagaat cctatcttaa aaaaggctat tctctaaatg accgtgttg 180
aacctcctat ttggaaaagc aatatgaaga gacctacaa ggaaaacgct cggtaaaaaga 240
aatccatctg gataaatatg gcaatatgga aagcgtggac acaattgagg aaggtagtaa 300
gggaaacaat atcaaaactg ccattgattt ggccttcaa gatagcgtgg atgctttgct 360
gaaaagttat ttcaattccg agctaggaaa tgggtggagc aaatattctg aaggtgtcta 420
tcagtcgccc cttaacccaa aaacagggtg tggtttatcc atgtcaggga tcaaacatga 480
cctgaaaacg ggagagttga ctcctgattc cttgggaacg gtaaccaatg tctttgtccc 540
aggttcggtt gtcaaggctg cgaccatcag ctgaggttgg gaaaatggtg ttttatcagg 600
```

```

aaaccaaacc ttaacagatc agcctattgt tttccaaggt tcagctccaa tttattcttg 660
gtataaattg gcatatggat cttttcctat tacagctgtg gaagccttgg agtattcatc 720
caatgcttac atgggttcaaa ccgctcttgg aatcatgggc cagacctatc aaccaaatat 780
gtttgttgga accagcaatt tggaaacagc tatgggaaaa cttcgtgcga cctttggcga 840
atatggcttg ggggctgcga ccggaattga cctaccagat gaatctactg gatttgttcc 900
caaagagtat agctttgcta attacatcac caattccttt gggcagtttg ataactatac 960
gcccattgcag ttggctcagt atgtagcaac tattgcaaat aatgggtgtc gtgtggctcc 1020
tcgtattgtt gaaggcattt atggtaataa tgataaggga ggactgggtg acttgattca 1080
gcaactgcaa ccgacagaga tgaataaggt caatatatcc gactccgata tgagcatctt 1140
gcaccaaggt ttttatcagg ttgcccattg tactagtggg ttgacaactg gacgtgcctt 1200
ttcaaattgg gccttggtat ccattagcgg aaaaacaggt acagccgaaa gctatgtggc 1260
agatggctag caagcaacca ataccaatgc ggtggcctat gccccatctg ataatcccca 1320
aatcgctgtc gcagtgggtt ttctctcataa taccaatcta acaaatgggt taggaccttc 1380
cattgcgcgt gacattatca atctgtatca aaaataccat ccaatgaact agaaaggaaa 1440
tta

```

<210> 1027

<211> 1443

<212> DNA

<213> Streptococcus pneumoniae strain StrR-09

<400> 1027

```

tattgcctct atttcaaagg agatgcctgg cattagtagt tctacttctt gggatagaaa 60
ggttttggaa acttcccttt cttctatagt tgggagtgtg tccagtgaag aagctgggtc 120
cccagcggaa gaagcagaag cctatcttaa aaaaggctat tctctaaatg atcgtgtagg 180
aacctcctat ttggaaaagc aatatgaaga gaccttaciaa ggaaaacgct cggtaaaaaga 240
aatccatctg gataaatatg gcaatatgga aagcgtggat acaattgagg aaggtagtaa 300
gggaaacaat atcaaaactga ccattgattt ggctttccaa gatagcgtgg atgctttact 360
gaaaagttat ttcaattccg agctagaaaaa tgggtggagcc aagtattctg aagggtgtct 420
tgcagtcgcc cttaacccaa aaacagggtg tgttttgtct atgtcaggga ttaaacatga 480
cttgaaaacg ggagatttaa cacctgattc cttgggaaca gtaaccaatg tctttgtccc 540
gggtttctgt gtcaaggcgg cgaccatcag ctctgggttg gagaatggag tcttatcagg 600
aaatcagacc ttgacagacc aaccgattgt cttccaaggt tcagctccga ttaattcttg 660
gtacactcag gcttacgatt catttccgat tacagcgggt gaagccttgg agtattcttc 720
taatgcctat atgggtccaaa cagctctagg tcttatgggg cagacctacc aacccaatat 780
gtttgtcggc accagcaatc tagagtctgc tatgggaaaa ttgctgtcaa cctttgggtg 840
atatggcttg ggctctgcga ctgggattga cctaccagat gaatctactg gatttgttcc 900
caaagagtat agctttgcta attacattac taatgccttt gggcagtttg ataactatac 960
gccgatgcag ttggctcagt atgtagcaac tattgcaaat gatgggtgtc gtgtggctcc 1020
tcgtattgtg gaaggcattt atggcaataa tgataaggga ggactgggtg acttgattca 1080
gcaactgcaa ccgacagaga tgaataaggt caatatatcc gactccgata tgagtattct 1140
gcaccaaggt ttttatcagg ttgctcatgg gactagcggg ttgacaacag gtcgtgcctt 1200
ttccaatggg gcagctgtat ccattagtgg aaaaacaggt accgcccga gttatgtagc 1260
aggtggccaa gaagccaaca atactaatgc tgtagcctat gcaccatcag ataactctca 1320
aatagctgtt gctgttgtct tccctcataa caccaatcta acaaatgggt taggaccttc 1380
cattgcgcgt gatattatca atctgtatca aaaataccat ccaatgaact agaaaggaa 1440
tta

```

<210> 1028

<211> 1446

<212> DNA

<213> Streptococcus pneumoniae strain StrR-10

<400> 1028

```

tattgcctct atttcaaagg agatgcctgg cattagtagt tctacctctt gggatagaaa 60
ggttttggaa acttctcttt cttctatagt agggagtgtg tccagtgaag aagctgggtc 120
cccagcggaa gaagcagaag cctatcttaa aaaaggctat tctctaaatg accgtgttgg 180
gacttcttac ctggaaaaac aatacgagga aaccttaciaa ggaaaacgct cggtaaaaaga 240
aatccatctg gataaatatg gcaatatgga aagcgtggat acaattgagg aaggtagtaa 300
gggaaacaat atcaaaactga ccattgattt ggctttccaa gatagcgtgg atgctttgtc 360
gaaaagttat ttcaattccg agctagggaaa tgggtggagct aagtattctg aaggcgtgta 420
tgcagtcgcc cttaacccca aaacagggtg tgttttgtct atgtcaggac tcaaacatga 480
cctgaaaacg ggagacttga cgcctgattc cttgggaacg gtaaccaatg tctttgtccc 540
agggtcagta gttaaggcgg ctaccatcag ctgaggttgg gaaaatgggt ttttatcagg 600

```

```

aaaccaaacc ttaacagatc agcctattgt tttccaaggt tcagctccaa tttattcttg 660
gtataaattg gcatatggat cttttcctat tacagctgtg gaagccttgg agtattcatc 720
taatgcttac atgggttcaaa ccgctcttgg aatcatgggc cagacctatc aaccaaatat 780
gtttgttgga accagcaatt tggaaacagc tatgggaaaa cttcgtgcga cctttggcga 840
atatggcttg ggggctgcga ccggaattga cctaccagat gaatctactg gatttgttcc 900
caaagagtat agcttttgcta attacattac taatgccttt gggcagtttg ataactatac 960
gccgatgcag ttggctcagt atgtagcaac tattgcaaat gatggtgttc gtgtggctcc 1020
tcgtattgtt gaaggcattt atggtaataa tgataaggga ggactgggtg acttgattca 1080
gcaactgcaa ccgacagaga tgaataaggc caatatatcc gactccgata tgagcatctt 1140
gcaccaaggt ttttatcagg ttgcccattg tactagtggg ttgacaactg gacgtgcctt 1200
ttcaaagggc gccttggtat ccattagcgg aaaaacaggt acagccgaaa gctatgtggc 1260
agatggctag caagcaacca ataccaatgc ggtggcctat gcccactctg ataatcccca 1320
aatcgctgtt gcagtggtct ttcctcataa taccaatcta acaaaggttg taggaccttc 1380
cattgcgcgt gacattatca atctgtatca aaaataccat ccaatgaact agaaaggaaa 1440
ttatgc

```

<210> 1029

<211> 1423

<212> DNA

<213> Streptococcus pneumoniae strain StrR-11

<400> 1029

```

ttgcctctat ttcaaaggag atgcctggca ttagtatttc tacttcttgg gatagaaagg 60
ttttggaaac ttccctttct tctatagttg ggagtgtatc cagtgaaaaa gctgggtctcc 120
cagcggaaga agcagaagcc tatcttaaaa aaggctattc tctaaatgac cgtgtaggaa 180
cctcctattt ggaaaagcaa tatgaagaga ctttacaagg aaaacgctcg gtaaaagaaa 240
tccatctgga taaatatggc aatatggaaa gcgtggatac aattgaggaa ggtagtaagg 300
gaaacaatat caaactgacc attgatttgg ccttccaaga tagcgtggat gctttactga 360
aaagttattt caattctgag ctagaaaatg gtggagccaa gtattctgaa ggtgtctatg 420
cagtcgcccc taacccaaaa acaggtgcgg tttgtctat gtcagggatt aaacatgact 480
tgaaaacggg agagttgacg cctgattcct tgggaacggg aaccaatgtc tttgttccag 540
gttcggttgt caaggcggcg accatcagct caggttggga aaatggagtc ttgtcaggaa 600
accagacctt gacagaccag tccattgtct tccaagggtc agctcccatc aattcttggg 660
atactcaggg ttacgggtta tccctatca cagcggtcca agctctggag tattcatcca 720
atgcttatat ggtccaaaca gccttaggtc ttatggggca gacctatcaa cccaatatgt 780
ttgtcggcac cagcaatcta gactctgcta tgggtaaatt gcgttcaacc tttggcgaat 840
atggcttggg ggctgcgact gggattgatc taccagatga atctactgga gacttatcaa 900
aagactataa ctttgccaat ttcattacca atgccttgg gcagtttgat aactataccc 960
caatgcaatt ggctcagtat gttagcaacta ttgcaaatga tgggtgttcgt gtggctcctc 1020
gtattgttga aggcatttat ggtaataatg ataaggagg actgggtgac ttgattcagc 1080
aactgcaacc gacagagatg aataagggtc atatatccga ctccgatatg agtgtcttgc 1140
accaaggttt ttatcaggtt gctcatggga ctagtgggtt gacaactggc cgtgcctttt 1200
caaatgggtg cttgggtatcc attagcggaa aaacgggtac agccgaaagc tatgtggcag 1260
atggctcagga agcaaccaat accaatgcgg tggcctatgc cccatctgat aatcccaaaa 1320
tcgctgtcgc agtgggtctt cctcataata ccaatctaac aaatgggtga ggaccttcca 1380
ttgcgcgtga cattatcaat ctgtatcaaa aataccatcc aat
1423

```

<210> 1030

<211> 1447

<212> DNA

<213> Streptococcus pneumoniae strain StrR-12

<400> 1030

```

tattgcctct atttcaaagg agatgcctgg cattagttat tctacttctt gggatcgaaa 60
ggttttggaa acttcccttt cttctatagt agggagtgtg tccagtgaag aagctgggtc 120
cccagcggaa gaagcagaat cctatcttaa aaaaggctat tctctaaatg accgtgttgg 180
aacctcctat ttggaaaagc aatatgaaga gaccttacia ggaaaacgct cggtaaaaa 240
aatccatctg gataaatatg gcaatatgga aagcgtggac acaattgagg aaggtagtaa 300
gggaaacaat atcaaaactg ccattgattt ggcttccaa gatagcgtgg atgctttgct 360
gaaaagttat ttcaattccg agctaggaaa tgggtggagc aaatattctg aagggtgtct 420
tcgagtcgcc cttaacccaa aaacaggtgc tgttttatcc atgtcaggga tcaaactatg 480
cctgaaaacg ggagagttga ctctgattc cttgggaacg gtaaccaatg tctttgtccc 540
agggttcggt gtcaaggctg cgaccatcag ctgaggttgg gaaaatgggt ttttatcagg 600
aaaccaaacc ttaacagatc agcctattgt tttccaaggt tcagctccaa tttattcttg 660

```

```

gtataaattg gcatatggat cttttcctat tacagctgtg gaagccttgg agtattcatc 720
caatgcttac atgggttcaaa ccgctcttgg aatcatgggc cagacctatc aaccaaatat 780
gtttgttggg accagcaatt tggaaacagc tatgggaaaa cttcgtgcga cttttggcga 840
atatggcttg ggggctgcga ccggaattga cctaccagat gaatctactg gatttgttcc 900
caaagagtat agctttgtcta attacatcac caattccttt gggcagtttg ataactatac 960
gcccatgcag ttggctcagt atgtagcaac tattgcaaat aatgggtgtc gtgtggctcc 1020
tcgtattgtt gaaggcattt atggtaataa tgataaggga ggactgggtg acttgattca 1080
gcaactgcaa ccgacagaga tgaataaggt caatatatcc gactccgata tgagcatctt 1140
gcaccaaggt ttttatcagg ttgcccattg tactagtggg ttgacaactg gacgtgcctt 1200
ttcaaattgg gccttggtat ccattagcgg aaaaacaggt acagccgaaa gctatgtggc 1260
agatggctcag caagcaacca ataccaatgc ggtggcctat gccccatctg ataactccca 1320
aatcgctgtc gcagtggctt ttctcataa taccaatcta acaaatgggt taggaccttc 1380
cattgcgcgt gacattatca atctgtatca aaaataccat ccaatgaact agaaagggaa 1440
ttatgct

```

<210> 1031
 <211> 1446
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-13

```

<400> 1031
attgcctcta tttcaaagga gatgcctggc attagtagtt ctacctcttg ggatagaaaag 60
gttttggaaa cttctctttc ttctatagta gggagtgtat ccagtgaaaa agctgggtctc 120
ccagcgggaag aagcagaagc ctatctttaa aaaggctatt ctctaaatga ccgtgttggg 180
acttcttacc tggaaaaaca atacgaggaa accttacaag gaaaacgctc ggtaaaagaa 240
atccatcttg ataaatatgg caatatggaa agcgtggata caattgagga aggtagtaag 300
ggaaacaata tcaaaactgac cattgatttg gccttccaag atagcgtgga tgctttgctg 360
aaaagttatt tcaattccga gctagggaaat ggtggagcta agtattctga agcgtgtat 420
gcagtcgccc ttaaccccaa aacagggtgt gttttgtcta tgtcaggact caaacatgac 480
ctgaaaaacgg gagacttgac gctgattcc ttgggaacgg taaccaatgt ctttgtccca 540
gggtcagtag ttaaggccgc taccatcagc tcagggttggg aaaatgggtg tttatcagga 600
aaccaaacct taacagatca gcctattgtt ttccaaggtt cagctccaat ttattcttgg 660
tataaattgg catatggatc ttttcctatt acagctgttg aagccttggg gtattcatct 720
aatgcttaca tgggttcaaac cgctcttggg atgggaaaac ttcgtgcgac ctttggcgaa 840
tttggtggaa ccagcaattt ggaaacagct atgggaaaac ctaccagatg aatctactgg atttgttccc 900
tatggcttgg gggctgcgac cggaattgac ctaccagatg aatgcctttg ggcagtttga taactatacg 960
aaagagtata gctttgctaa ttacattact aatgcctttg ggcagtttga tgggtgttcg tgtggctcct 1020
ccgatgcagt tggctcagta tgtagcaact attgcaaatg gactgggtga cttgattcag 1080
cgtattgttg aaggcattta tggtataaat gataagggag gactgggtga gagcatcttg 1140
caactgcaac cgacagagat gaataaggct aatataatcc actccgatat gatgctctt 1200
caccaagggt tttatcaggt tgcccattgt actagtggat tgacaactgg acgtgccttt 1260
tcaaattggc ccttggtatc cattagcgga aaaacaggtg cagccgaaaag ctatgtggca 1320
gatggtcagc aagcaaccaa taccaatgcg gtggcctatg ccccatctga taatcccaa 1380
atcgctgttg cagtgtctt tcctcataat accaatctaa caaatgggtg aggcaccttc 1440
attgcgcgtg acattatcaa tctgtatcaa aaataccatc caatgaacta gaaagggaaat 1446
tatgct

```

<210> 1032
 <211> 1446
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-14

```

<400> 1032
attgcctcta tttcaaagga gatgcctggc attagtagtt ctacttcttg ggatagaaaag 60
gttttggaaa cttccctttc ttctatagtt gggagtgtat ccagtgaaaa agctgggtctc 120
ccagcgggaag aagcagaagc ctatctttaa aaaggctatt ctctaaatga tcgtgttggg 180
acctctatt tggaaaaagca atatgaagag accttacaag gaaaacgctc ggtaaaagaa 240
atccatcttg ataaatatgg caatatggaa agtgtggata caattgagga aggtagtaag 300
ggaaacaata tcaagctgac cattgatttg gccttccaag atagcgtgga tgctttgctg 360
aaaagttatt tcaattccga gctagggaaat ggtggagcca agtattctga ggggtgtgtat 420
gcagtcgccc ttaaccccaa aacagggtgt gttttgtcta tgtcaggact caaacatgac 480
ctgaaaaacgg gagagttgac tcctgattcc ttgggaacgg taaccaatgt ctttgtccca 540
ggttcggttg tcaaggctgc gaccatcagc tctggctggg aaaatggagt cttatcagga 600
aaccagacct tgacagacca gtccattgtc tttcaaggtt cagctcccat caattcttgg 660

```

tataactcagg	cttacgggttc	attccctatc	acagcagtc	aagctctgga	gtattcatct	720
aatgcctata	tggtccaaac	agcttttaggt	cttatggggc	agacctacca	acctaatatg	780
tttgtcggca	ccagcaacct	agagtctgct	atggggaaat	tgcgttcaac	ctttggtgaa	840
tatggtttgg	gttctgcgac	cgggattgac	ctaccagatg	aatctactgg	atttgttccc	900
aaagactata	gctttgctaa	ttacatcacc	aatgcctttg	ggcagtttga	taactatacg	960
ccgatgcagt	tggctcagta	tgtagcaact	attgcaaata	atgggtgttcg	tgtggctcct	1020
cgtattgttg	aaggcattta	tggaaataat	gataagggag	gcctaggcga	cttgattcag	1080
caactgcaac	cgacagagat	gaataaggtc	aatatatccg	actctgatat	gagtattttg	1140
caccaagggt	tttatcaggt	tgtctatggg	actagtggat	tgacaactgg	acgtgccttt	1200
tcaaatggcg	cagcgggtatc	cattagtggg	aaaacaggta	ctgccgaaag	ttatgttgag	1260
ggtggtcaag	aagctaacaa	tactaatgct	gtggcctatg	caccatcaga	taatcctcaa	1320
atcgctgtag	ctgttgtctt	ccctcataac	accaacctta	caaagtgtgt	cggaccttcc	1380
attgcgcgcg	atattatcaa	cctctataac	caacatcatc	caatgaatta	gaaaggaaca	1440
tatgct						1446

<210> 1033
 <211> 1446
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-15

<400> 1033						
tattgcctct	atttcaaagg	agatgcctgg	cattagtatt	tctacttctt	gggatagaaa	60
ggttttggaa	acttcccttt	cttctatagt	tgggagtgtg	tccagtgaag	aagctgggtct	120
cccagcggaa	gaagcagaag	cctatcttaa	aaaaggctat	tctctaaatg	accgtgttgg	180
aacctcgat	ttggaaaagc	aatatgaaga	gaccttacia	ggaaaacgct	cggtaaaaga	240
aatccatctg	gataaatatg	gcaatatgga	aagcgtggat	acaattgagg	aaggtagtaa	300
gggaaacaat	atcaagctga	ccattgattt	ggccttccaa	gatagcgtgg	atgctttgct	360
gaaaagttat	ttcaattccg	agctaggaaa	tggtggagcc	aagtattctg	aggggtgtga	420
tgcagtcgcc	cttaacccca	aaacagggtg	tgttttgtct	atgtcaggac	tcaaactata	480
cctgaaaacg	ggagagttga	ctcctgattc	cttgggaacg	gtaaccaatg	tctttgtccc	540
aggttcgggt	gttaaggccg	ctaccatcag	ctcagggttg	gaaaatgggtg	ttttatcagg	600
aaaccaaacc	ttaacagatc	agcctattgt	tttccaaagg	tcagctccaa	tttattcttg	660
gtataaattg	gcataatggat	cttttcctat	tacagctgtg	gaagccttgg	agtattcatt	720
caatgcttac	atggttcaaa	ccgctcttgg	aatcatgggc	cagacctatc	aaccaaatat	780
gtttgttggg	accagcaatt	tggaacacag	tatgggaaaa	cttcgtgcga	cctttggcga	840
atatggcttg	ggggtgcga	ccggaattga	cctaccagat	gaatctactg	gatttgttcc	900
caaagagtat	agctttgcta	attacatcac	caatgccttt	gggcagtttg	ataactatac	960
gcccattgcg	ttggctcagt	atgtagcaac	tattgcaaat	gatgggtgttc	gtgtggctcc	1020
tcgtattggt	gaaggcattt	atggtaataa	tgataaggga	ggactgggtg	acttgattca	1080
gcaactgcaa	ccgacagaga	tgaataaggt	caatataatc	gactccgata	tgagtatctt	1140
gcaccaaggt	ttttatcagg	ttgctcatgg	gactagtggg	ttgacaactg	gacgtgcttt	1200
ttcaaattgg	gccttggtat	ccattagtgg	gaaaacagggt	actgccgaaa	gttatgttgc	1260
aggtggtcaa	gaagccaaca	ataccaacgc	ggtggcctat	gccccatcag	ataatcctca	1320
aatcgctggt	gccgttgtct	tccctcataa	caccaatcta	acaaatgggtg	ttggaccttc	1380
tattgcacgc	gatattatca	acctctataa	ccaacaccat	ccaatgaatt	agaaaggaac	1440
ttatgc						1446

<210> 1034
 <211> 1670
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-01

<400> 1034						
ggaaactgca	gagggtcaagg	ggattgattt	tacaaccagt	cccaatcgta	gttatccaaa	60
cggacaattt	gcttctagtt	ttatcgggact	agctcagctc	catgaaaaatg	aagatggcag	120
caagagctta	ctgggaacct	ctggaatgga	gagttccttg	aacagtattc	ttgcagggac	180
agacgggtatt	attacctatg	aaaaagaccg	tgtaggaaat	atcgtagcag	gtacagaact	240
ggatcgcgaa	caaactgtgg	atggcaagga	tgtttatata	acattgtcta	gtccgctaca	300
atctttcatg	gaaactcaga	tggatgcctt	tctagaaaaa	gtaaaaggta	agtatatgac	360
cgcgaccttg	gtcagtgcaa	agaccgggtg	aatcctcgct	accacccaac	gacctacctt	420
taatgcagat	actaaagaag	gaatcactga	ggacttttgt	tggcgtgata	ttctttatca	480
aagtaactat	gaaccaggat	cagccatgaa	ggttatgacg	ttagcttctt	ctattgataa	540
taataccttc	ccaagtggag	aatacttcaa	tagcagtgaa	ttcaaaatag	cggatgcgac	600
gactcgagat	tgggatgtta	atgatgggtt	gactactggg	gggatgatga	ctttcttaca	660

```

agggtttcgcct cactccagta atgttgggaat gagtctactt gaacaaaaaa tgggagatgc 720
tacttgggttg gattatctaa aacgcttttaa atttgggggtt ccaactcgct ttggcttgac 780
agatgaatac gctgggtcaac ttccagctga taatattggt agtattgctc aaagctcatt 840
tgggcaagga atttcagtga cacaacacaca aatgcttcgt gccttttacag ctattgctaa 900
tgatggaggtt atgctggagc caaaatttat aagtgcattt tatgatacta acaatcagtc 960
tgtacgtaag tcacaaaaag aaatagtagg aaatcctgtt tccaaagagg cagcaagcac 1020
aactcgaaat cacatgatct tagttgggac ggaccctcta tatggaacta tgtataatca 1080
ctacacagga aagccaatta taacagttcc tggacaaaat gtagcagtta aatccggtac 1140
ggctcaaatc gctgatgaga aaaatggagg atacttgggt gggtctacca attatatttt 1200
ctcagttgtg actatgaatc ctgctgaaaa tcctgatttt atcttgtagt taacggttca 1260
acagcctgag cattattcag gtatccagtt gggagaattt gccaccccaa tcttggagcg 1320
ggcttcagct atgaaagaat ctctcaatct tcaatctcca gccaaaaatt tagataaagt 1380
tacgacagaa tcttcttatg caatgcctag catcaaggat atttcacctg gtgagttggc 1440
ggaagcctta cgccgaaata ttgtgcaacc aatcggtgta ggtactggaa caaagattaa 1500
agagacttct gtagaagaag ggaccaatct tgcaccaaac caacaagttc tccttttatt 1560
ggataaggta gaagaaattc cagacatgta tggctggaaa aaagagactg ccgagacctt 1620
tgctaaatgg ttggatattg aactggaatt tgaaggttca gggtccggtg 1670

```

<210> 1035

<211> 1683

<212> DNA

<213> Streptococcus pneumoniae strain StrR-02

<400> 1035

```

aaagaattgg aaactgcaga ggtcaagggg attgatttta caaccagtcc caatcgtagt 60
tacccaaattg gacaattttgc ttctagtttt atcgggtctag ctacagctcca tgaaaaatgaa 120
gatggaagca agagtttgcgt gggaacctct ggaatggaga gttccttgaa cagtattctt 180
gcagggacag acggcattat tacctatgaa aaggatcgct tgggcaatat tgtacccgga 240
acagaacaag tttcccaaca aacggtggat ggcaaggatg ttacacaaac catttccagc 300
ccctccagct ccttcattgga aactcagatg gatgcctttc tagaaaaagt aaaaggtaag 360
tatatgaccg cgaccttgggt cagtgcacaa accggtgaaa tcctcgctac cacccaacga 420
cctaccttta atgcagatac taaagaagga atcactgagg actttgtttg gcgtgatatt 480
ctttatcaaa gtaactatga accaggatca gccatgaagg ttatgacgtt agcttcttct 540
attgataata ataccttccc aagtggagaa tacttcaata gcagtgaatt caaaatagcg 600
gatgcgacga ctcgagattg ggatgttaat gatggtttga ctactggtgg gatgatgact 660
ttcttacaag gtttcgctca ctccagtaat gttggaatga gtctacttga acaaaaaatg 720
ggagatgcta cttgggttggg ttatctaaaa cgcttttaaat ttgggggttcc aactcgcttt 780
ggcttgacag atgaatacgc tgggtcaact ccagctgata atattgtagg tattgtctaa 840
agctcatttg ggcaagggaat ttccagtaca caaacacaaa tgcttcgtgc ctttacagct 900
attgctaattg atggagttat gctggagcca aaatttataa gtgctattta tgataactaa 960
aatcagtcctg tacgtaagtc acaaaaaagaa atagtaggaa atcctgtttc caaagaggca 1020
gcaagcacaa ctcgaaatca catgatctta gttgggacgg accctctata tggaaactatg 1080
tataatcact acacaggaaa gccaattata acagtctctg gacaaaaatgt agcagttaaa 1140
tccgggtacgg ctcaaattcgc tgatgagaaa aatggaggat acttggttgg ttctaccaat 1200
tatattttct cagttgtgac tatgaatcct gctgaaaatc ctgattttat cttgtatgta 1260
acggttcaac agcctgagca ttattcaggt atccagttgg gagaatttgc caccceaatc 1320
ttggagcggg cttcagctat gaaagaatct ctcaatcttc aatctccagc caaaaaattt 1380
gataaagtta cgacagaatc ttcttatgca atgcctagca tcaaggatat ttcacctggg 1440
gagttggcgg aagccttacg ccgaaatatt gtgcaaccaa tcgttgtagg tactggaaca 1500
aagattaaag agacttctgt agaagaaggg accaatcttg caccaaacca acaagttctc 1560
cttttatcgg ataaggtaga agaaattcca gacatgtatg gctggaaaaa agagactgcc 1620
gagaccttgg ctaaatgggt ggatattgaa ctggaatttg aaggttcagg ttccggtgtt 1680
cag

```

<210> 1036

<211> 1682

<212> DNA

<213> Streptococcus pneumoniae strain StrR-03

<400> 1036

```

tcaaaaaaga attggaaact gcagagggtca aggggattga ttttacaacc agtcccaatc 60
gtagttaccc aaatggacaa ttgcttctta gttttatcgg tctagctcag ctccatgaaa 120
atgaagatgg aagcaagagt ttgctgggaa cctctggaat ggagagttcc ttgaacagta 180
ttcttgcagg gacagacggc attattacct atgaaaagga tcgtctgggc aatattgtac 240

```

```

ccggaacaga acaagttttcc caacaaacgg tggatggcaa ggatgtttac acaaccattt 300
ccagccccct ccagtccttc atggaaactc agatggatgc ctttctagaa aaagtaaaag 360
gtaagtatat gaccgcgacc ttggtcagtg caaagaccgg tgaaatcctc gctaccaccc 420
aacgacctac ctttaatgca gatactaaag aaggaatcac tgaggacttt gtttggcggtg 480
atattcttta tcaaagtaac tatgaaccag gatcagccat gaaggttatg acgttagctt 540
cttctattga taataatacc ttcccaagtg gagaatactt caatagcagt gaattcaaaa 600
tagcgggatgc gacgactcga gattgggatg ttaatgatgg tttgactact ggtgggatga 660
tgactttctt acaaggtttc gctcactcca gtaatggtgg aatgagtcta cttgaacaaa 720
aaatgggaga tgctacttgg ttggattatc taaaacgctt taaatttggg gttccaactc 780
gctttggctt gacagatgaa tacgctgggtc aacttccagc tgataatatt gttagtattg 840
ctcaaagctc atttgggcaa ggaatttcag tgacacaaac acaaatgctt cgtgccttta 900
cagctattgc taatgatgga gttatgctgg agccaaaatt tataagtgct atttatgata 960
ctaacaatca gtctgtacgt aagtcacaaa aagaaatagt aggaaatcct gtttccaaag 1020
aggcagcaag cacaactcga aatcacatga tcttagttgg gacggaccct ctatatggaa 1080
ctatgtataa tcactacaca ggaaagccaa ttataacagt tcttgacaaa aatgtagcag 1140
ttaaatccgg tacggctcaa atcgctgatg atcctgctga aaatcctgat tttatcttgt 1200
ccaattatat tttctcagtt gtgactatga atcctgctga aaatcctgat tttatcttgt 1260
atgtaacggt tcaacagcct gagcattatt caggtatcca gttgggagaa tttgccaccc 1320
caatcttggg gcgggcttca gctatgaaag aatctctcaa tcttcaatct ccagccaaaa 1380
atttagataa agttacgaca gaatcttctt atgcaatgcc tagcatcaag gatatttcac 1440
ctgggtgagtt ggcggaagcc ttacgccgaa atattgtgca accaatcggt gtaggtactg 1500
gaacaaagat taaagagact tctgtagaag aagggaccaa tcttgacca aaccaacaag 1560
ttctcctttt atcggataag gtagaagaaa ttccagacat gtatggctgg aaaaaagaga 1620
ctgccgagac ctttgctaaa tggttggata ttgaactgga atttgaaggt tcaggttccg 1680
tt

```

<210> 1037
 <211> 1681
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-04

```

<400> 1037
caaaaaagaa ttggaaaactg cagagggtcaa ggggattgat ttacaaacca gtcccaatcg 60
tagttatcca aacggacaat ttgcttctag ttttatcgga ctagctcagc tccatgaaaa 120
tgaagatggc agcaagagct tactgggaac ctctggaatg gagagttcct tgaacagtat 180
tcttgccagg acagacggta ttattaccta tgaaaaagac cgtgtaggaa atatcgtacc 240
aggtacagaa ctgggtatcg cacaactgtg ggatggcaag gatgtttata caacattgtc 300
tagtccgcta caatctttca ttgaaaacta gatggatgcc tttctagaaa aagtaaaagg 360
taagtatatg accgcgacct ttgtcagtcg aaagaccggt gaaatcctcg ctaccacca 420
acgacctacc tttaatgcag atactaaaga aggaatcact gaggactttg tttggcggtg 480
tattctttat caaagtaact atgaaccagg atcagccatg aagggttatga cgtagcttc 540
ttctattgat aataatacct tcccaagtgg agaatacttc aatagcagtg aattcaaaa 600
agcggatgcg acgactcgag attgggatgt taatgatggg ttgactactg gtgggatgat 660
gactttctta caaggtttcg ctactccag taatgttggg atgagtctac ttgaacaaaa 720
aatgggagat gctacttggg ttgattatct aaaacgcttt aaatttgggg ttccaactcg 780
ctttggcttg acagatgaat acgctgggtc acttccagct gataatattg ttagtattgc 840
tcaaagctca tttgggcaag gaatttcagt gacacaaaca caaatgcttc gtgcctttac 900
agctattgct aatgatggag ttatgctgga gccaaaattt ataagtgcta tttatgatac 960
taacaatcag tctgtacgta agtcacaaaa agaaatagta ggaaatcctg tttccaaaga 1020
ggcagcaagc acaactcgaa atcacatgat cttagttggg acggaccctc tatatggaac 1080
tatgtataat cactacacag gaaagccaat tataacagtt cctggacaaa atgtagcagt 1140
taaatccggt acggctcaaa tcgctgatga gaaaaatgga ggatacttgg ttggttctac 1200
caattatatt ttctcagttg tgactatgaa tctgtgtgaa aatcctgatt ttatcttgta 1260
tgtaacgggt caacagcctg agcattatct aggtatccag ttggggagaa ttgccacccc 1320
aatcttggag cgggcttcag ctatgaaaga atctctcaat cttcaatctc cagccaaaaa 1380
tttagataaa gttacgacag aatcttctta tgcaatgcct agcatcaagg atatttcacc 1440
tgggtgagtt gcggaagcct tacgccgaaa tattgtgcaa ccaatcggtg taggtactgg 1500
aacaagatt aaagagact ctgtagaaga agggaccaat cttgcaccaa accaacaagt 1560
tctcctttta tcggataagg tagaagaaat tccagacatg tatggctgga aaaaagagac 1620
tgccgagacc tttgctaaat ggttggatat tgaactggaa tttgaaggtt caggttccg 1680
t

```

<210> 1038
 <211> 1685

<212> DNA
<213> Streptococcus pneumoniae strain StrR-05

```

<400> 1038
aaaaaagaat tggaaactgc agagggtcaag gggattgatt ttacaaccag tcccaatcgt 60
agttatccaa acggacaatt tgcttctagt tttatcggac tagctcagct ccatgaaaat 120
gaagatggca gcaagagctt actgggaacc tctggaatgg agagttcctt gaacagtatt 180
cttgacagga cagacgggat tattacctat gaaaaagacc gtgtaggaaa tatcgtacca 240
ggtacagaac tggatcgca acaaaactgt gatggcaagg atgtttatac aacattgtct 300
agtcgcctac aatctttcat ggaaactcag atggatgcct ttctagaaaa agtaaaagggt 360
aagtatatga ccgcgacctt ggtcagtgca aagaccgggt aaatcctcgc taccaccaa 420
cgacctacct ttaatgcaga tactaaagaa ggaatcactg aggttatgac gttagcttct 540
attcttttatc aaagtaacta tgaaccagga tcagccatga aggttatgac attcaaaata 600
tctattgata ataatacctt cccaagtggg gaatacttca atagcagtga tgggatgatg 660
gcggatgcga cgactcgaga ttgggatggt aatgatgggt tgactactgg tgggatgatg 720
actttcttac aagggttctgc tcaactccagt aatggttgaa tgagtctact tgaacaaaaa 780
atgggagatg ctacttggtt ggattatcta aaacgcttta aatttggggt tccaactcgc 840
tttggttga cagatgaata cgctgggtcaa ctccagctg ataatttgt tagtattgct 900
caaagctcat ttgggcaagg aatttcagtg acacaaacac aaatgcttcg tgcctttaca 960
gctattgcta atgatggagt tatgctggag ccaaaattta taagtgcctt ttccaaagag 1020
aacaatcagt ctgtacgtaa gtcacaaaaa gaaatagtag gaaatcctgt ttccaaagag 1080
gcagcaagca caactcgaac tcacatgata ttagtgggga cggaccctct ataggaact 1140
atgtataatc actacacagg aaagccaatt ataacagttc ctggacaaaa tgtagcagtt 1180
aaatccggtg cggctcaaat cgctgatgag aaaaatggag gatacttggt tgggtctacc 1240
aattatattt tctcagttgt gactatgaat cctgctgaaa atcctgattt tatctgtat 1260
gtaacggttc aacagcctga gcattattca ggtatccagt tgggagaatt tgccacccca 1320
atcttgagac gggcttcagc tatgaaagaa tctctcaatc ttcaatctcc agccaaaaat 1380
ttagataaag ttacgacaga atcttcttat gcaatgccta gcatcaagga tatttcacct 1440
ggtgagttgg cggaagcctt acgcccgaat attgtgcaac caatcgttgt aggtactgga 1500
acaaagatta aagagacttc tgtagaagaa gggaccaatc ttgcaccaa ccaacaagtt 1560
ctccttttat cggataaggt agaagaaatt ccagacatgt atggctggaa aaaagagact 1620
gccgagacct ttgctaaatg gttggatatt gaactggaat ttgaagggtc aggttccggt 1680
gttca

```

<210> 1039
<211> 1679
<212> DNA
<213> Streptococcus pneumoniae strain StrR-06

```

<400> 1039
aaaagaattg gaaactgcag aggtcaaggg gattgatttt acaaccagtc ccaatcgtag 60
ttatccaaac ggacaatttg cttctagttt tatcggacta gctcagctcc atgaaaatga 120
agatggcagc aagagcttac tgggaacctc tggaaatggag agttccttga acagtattct 180
tgcaggggac gacgggtatta ttacctatga aaaagaccgt gtaggaaata tcgtaccagg 240
tacagaactg gtatcgcaac aaactgtgga tggcaaggat gtttatacaa cattgtctag 300
tccgctacaa tctttcatgg aaactcagat ggatgccttt ctagaaaaag taaaagggtaa 360
gtatatgacc gcgaccttgg tcagtgcaca gaccggtgaa atcctcgcta ccaccaacg 420
acctaccttt aatgcagata ctaaagaagg aatcactgag gactttgttt ggcgtgatat 480
tctttatcaa agtaactatg aaccaggatc agccatgaag gttatgacgt tagcttcttc 540
tattgataat aataccttcc caagtggaga atacttcaat agcagtgaat tcaaaatagc 600
ggatgcgacg actcgagatt gggatgttaa tgatggtttg actactgggt ggatgatgac 660
tttcttaciaa ggtttcgctc actccagtaa tgttggaatg agtctacttg aacaaaaaat 720
gggagatgct acttggttgg attatctaaa acgctttaa tttgggggtc caactcgctt 780
tggcttgaca gatgaatacg ctgggtcaact tccagctgat aatattgtta gtattgctca 840
aagctcattt gggcaaggaa tttcagtgac acaaacacaa atgcttcgtg cctttacagc 900
tattgctaata gatggagtta tgctggagcc aaaatttata agtgctattt atgatactaa 960
caatcagctc gtacgtaagt cacaaaaaga aatagtagga aatcctgttt ccaaagaggg 1020
agcaagcaca actcgaaatc acatgatctt agttgggacg gaccctctat atggaaacta 1080
gtataatcac tacacaggaa agccaattat aacagttcct ggacaaaatg tagcagttaa 1140
atccggtacg gctcaaatcg ctgatgagaa aaatggagga tacttggttg gttctaccaa 1200
ttatattttc tcagttgtga ctatgaatcg tgctgaaaat cctgatttta tcttgatgt 1260
aacggttcaa cagcctgagc attattcagg tattccagtt ggagaatttg ccaccccaat 1320
cttgagcggg gcttcagcta tgaaagaatc tctcaatctt caatctccag ccaaaaaatt 1380
agataaagtt acgacagaat cttcttatgc aatgcctagc atcaaggata tttcacctgg 1440
tgagttggcg gaagccttac gccgaaatat tgtgcaacca atcgttgtag gtactggaac 1500

```



```
aaagattaaa gagacttctg tagaagaagg gaccaatctt gcaccaaacc aacaagttct 1560
ccttttatcg gataaggtag aagaaattcc agacatgtat ggctggaaaa aagagactgc 1620
cgagaccttt gctaaatggg tggatattga actggaattt gaagggttcag gttccggtg 1679
```

<210> 1040
<211> 1685
<212> DNA
<213> *Streptococcus pneumoniae* strain StrR-07

```
<400> 1040
taaaaaggat ctaaaagacg ctagtggtga aggaattgac ttcacaacta gccctaatag 60
aagctatcca aatggacaat tcgcttctag ttttattggg ttggcccaac tccatgaaaa 120
tgaggatggg agcaagagtt tgctgggaac ttctgggatg gagagtccct tgaacagtat 180
tcttgacggg aaagacggta ttattaccta tgaaaaagat cgtctgggta atattgtccc 240
tggaacagaa caagtttccc aacaaacggg agatggcaag gatgtttata caacattgtc 300
tagtccgcta caatctttca tggaaactca gatggatgcc tttctagaaa aagtaaaagg 360
taagtatatg accgcgacct tggtcagtgc aaagaccggg gaaatcctcg ctaccacca 420
acgacctacc tttaatgcag atactaaaga aggaatcact gaggactttg tttggcgtga 480
tattctttat caaagtaact atgaaccagg atcagccatg aaggttatga cgttagcttc 540
ttctattgat aataatacct tcccaagtgg agaatacttc aatagcagtg aattcaaaat 600
agcggatgag acgactcgag attgggatgt taatgaaggg ttgactactg gtgggatgat 660
gactttctta caaggtttcg ctactccag taatgttggg atgagtctac ttgaacaaaa 720
aatgggagat gctacttggg tggattatct aaaacgcttt aaatttgggg ttccaactcg 780
ctttggcctg acagatgaat acgctgggca acttccagct gataatattg ttagtattgc 840
tcaaagctca tttgggcaag gaatttcagt gacacaaaac caaatgcctc gtgcctttac 900
agctattgct aatgatggag ttatgctgga gccaaaattt ataagtgcta tttatgatac 960
taacaatcag tctgtacgta agtcacaaaa agaaatagta ggaaatcctg tttccaaaga 1020
ggcagcaagc acaactcgaa atcacatgat cttagtgggg acggacctc tatatggaac 1080
tatgtataat cactacacag gaaagccaat tataacagtt cctggacaaa atgtagcagt 1140
taaattccgg acggctcaaa tcgctgatga gaaaaatgga ggatacttgg ttggttctac 1200
caattatatt ttctcagctg tgactatgaa tctgtctgaa aatcctgatt ttatcttgta 1260
tgtaacgggt caacagcctg agcattatc aggtatccag ttggggagaat ttgccacccc 1320
aatcttggag cgggcttcag ctatgaaaga atctctcaat cttcaatctc cagccaaaaa 1380
tttagataaa gttacgacag aatcttctta tgcaatgcct agcatcaagg atatttcacc 1440
tggtgagttg gcggaagcct tacgccgaaa tattgtgcaa ccaatcggtg taggtactgg 1500
aacaaagatt aaagagactt ctgtagaaga agggaccaat cttgcaccaa accaacaagt 1560
tctcctttta tcggataagg tagaagaaat tccagacatg tatggctgga aaaaagagac 1620
tgccgagacc tttgctaaat ggttggatat tgaactggaa tttgaagggt caggttccgt 1680
cgttc
```

<210> 1041
<211> 1696
<212> DNA
<213> *Streptococcus pneumoniae* strain StrR-08

```
<400> 1041
gtctatcaaa aaagaattgg aaactgcaga ggtcaagggg attgatttta caaccagtcc 60
caatcgtagt tatccaaacg gacaatttgc ttctagtttt atcggactag ctgagctcca 120
tgaaaatgaa gatggcagca agagcttact gggaacctct ggaatggaga gttccttgaa 180
cagtattctt gcagggacag acggtattat tacctatgaa aaagaccgtg taggaaatat 240
cgtaccaggt acagaactgg tatcgcaaca aactgtggat ggcaaggatg tttatacaac 300
attgtctagt ccgctacaat ctttcatgga aactcagatg gatgccttcc tagaaaaagt 360
aaaaggtaag tatatgaccg cgaccttggg cagtgcacaa accggtgaaa tcctcgctac 420
caccacaaga cctaccttta atgcagatac taaagaagga atcactgagg actttgtttg 480
gcgtgatatt ctttatcaaa gtaactatga accaggatca gccatgaagg ttatgacgtt 540
agcttcttct attgataata ataccttccc aagtggagaa tacttcaata gcagtgaatt 600
caaaatagcg gatgcgacga ctcgagattg ggatgttaat gatggtttga ctactggtgg 660
gatgatgact ttcttacaag gtttcgctca ctccagtaat gttggaatga gtctacttga 720
acaaaaaatg ggagatgcta cttgggttgg tttatctaaa cgctttaaatt ttggggttcc 780
aactcgcttt ggcttgacag atgaatacgc tgggtcaact ccagctgata atattgttag 840
tattgctcaa agctcatttg ggcaaggaat ttcagtgcac caaacacaaa tgcttcgtgc 900
ctttacagct attgctaatt atggagttat gctggagcca aaatttataa gtgctattta 960
tgataactaac aatcagctcg tacgtaagtc aaaaaagaa atagtaggaa atcctgtttc 1020
caaagaggca gcaagcacia ctcgaaatca catgatctta gttgggacgg accctctata 1080
```

tggaactatg	tataatcact	acacaggaaa	gccaatata	acagttcctg	gacaaaatgt	1140
agcagttaaa	tccggtacgg	ctcaaactcg	tgatgagaaa	aatggaggat	acttgggttg	1200
ttctaccaat	tatatcttct	cagttgtgac	tatgaatcct	gctgaaaatc	ctgattttat	1260
cttgtatgta	acggttcaac	agcctgagca	ttattcaggt	atccagttgg	gagaatttgc	1320
cacccaatc	ttggagcggg	cttcagctat	gaaagaatct	ctcaatcttc	aatctccagc	1380
caaaaattta	gataaagtta	cgacagaatc	ttcttatgca	atgcctagca	tcaaggatat	1440
ttcacctggg	gagttggcgg	aagccttacg	ccgaaatatt	gtgcaacca	tcgttgtagg	1500
tactggaaca	aagattaaag	agacttctgt	agaagaagg	accaatcttg	caccaaacca	1560
acaagttctc	cttttatcgg	ataaggtaga	agaaattcca	gacatgtatg	gctggaaaaa	1620
agagactgcc	gagacctttg	ctaaatgggt	ggatattgaa	ctggaatttg	aaggttcagg	1680
ttccgttggt	cagaag					1696

<210> 1042

<211> 1689

<212> DNA

<213> Streptococcus pneumoniae strain StrR-09

<400> 1042

aaaaaagagt	tggaactgc	agaggtcaag	gggattgatt	ttacaaccag	tcccaatcgt	60
agttaccaa	acggacaatt	tgcttctagt	tttatcggac	tagctcagct	ccatgaaaa	120
gaagatggca	gcaagagctt	gctgggaacc	tctggaatgg	agagttcctt	gaacagtatt	180
cttgcaggga	cagacggcat	tattacctat	gaaaaggatc	gtctgggaaa	tattgtcccc	240
ggaacggaac	aagtttccca	acaaactgta	gatggcaagg	atgtttatac	gactatttcc	300
agcaccttcc	agtccttcat	ggaaactcag	atggatgcct	ttctagaaaa	agtaaaaggt	360
aagtatatga	ccgcgacctt	ggtcagtgca	aagaccgggt	aaatcctcgc	taccaccaa	420
cgacctacct	ttaatgcaga	tactaaagaa	ggaatcactg	aggactttgt	ttggcgtgat	480
attctttatc	aaagtaacta	tgaaccagga	tcagccatga	aggttatgac	gttagcttct	540
tctattgata	ataatacctt	cccaagtggg	gaatacttca	atagcagtga	attcaaaaata	600
gcggatgcga	cgactcgaga	ttgggatggt	aatgatgggt	tgactactgg	tgggatgatg	660
actttcttac	aaggtttcgc	tcactccagt	aatgttggaa	tgagtctact	tgaacaaaa	720
atggggagatg	ctacttgggt	ggattatcta	aaacgcttta	aatttggggg	tccaactcgc	780
tttggcttga	cagatgaata	cgctgggtcaa	cttccagctg	ataatattgt	tagtattgct	840
caaagctcat	ttgggcaagg	aatttcagtg	acacaaacac	aaatgcttcg	tgcttttaca	900
gctattgcta	atgatggagt	tatgctggag	ccaaaattta	taagtgctat	ttatgatact	960
aacaatcagt	ctgtacgtaa	gtcacaaaaa	gaaatagtag	gaaatcctgt	ttccaaagag	1020
gcagcaagca	caactcgaaa	tcacatgac	ttagttggga	cggaccctct	atatggaact	1080
atgtataatc	actacacagg	aaagccaatt	ataacagttc	ctggacaaaa	tgtagcagtt	1140
aaatccggta	cggctcaaat	cgctgatgag	aaaaatggag	gatacttggg	tggttctacc	1200
aattatattt	tctcagttgt	gactatgaat	cctgctgaaa	atcctgattt	tatcttgat	1260
gtaacgggtc	aacagcctga	gcattattca	ggatccaggt	tgaggagaatt	tgccaccca	1320
atcttgggag	gggcttcagc	tatgaaagac	tctctcaatc	ttcaaacaac	agctaaagct	1380
ttgggcaag	taagtcaaca	aagtccttat	cctatgccta	gtgtcaagga	tatttcacct	1440
ggtgatttag	cagaagaatt	gcgtcgcaat	ctgtacaac	ccatcggtgt	gggaacagga	1500
acgaagatta	aaaacagttc	tgctgaagaa	gggaagaatc	ttgccccgaa	tcagcaagtc	1560
cttatcttat	ctgataaagt	agaggaagtt	ccagatatgt	atggttggac	aaaggagact	1620
gctgagaccc	ttgctaagt	gctcaatata	gaacttgaat	ttcaaggttc	gggttctact	1680
gtgcagaag						1689

<210> 1043

<211> 1690

<212> DNA

<213> Streptococcus pneumoniae strain StrR-10

<400> 1043

caaaaaagag	ttggaaactg	cagaggtcaa	ggggattgat	tttacaacca	gtcctaactc	60
tagttaccca	aacggacaat	ttgcttctag	ttttatcggg	ctagctcaac	tccatgaaaa	120
tgaagatgga	agcaagagtt	tgctgggaac	ttctggaatg	gagagttcct	tgaacagtat	180
tcttgcaggg	aaagacggta	ttattactta	tgaaaaggat	cgtctgggta	atattgtccc	240
tggaacagaa	caagtttccc	aacaaacggg	agatggcaag	gatgtttata	caacattgtc	300
tagtccgctc	caatctttca	tggaactcca	gatggatgcc	tttctagaaa	aagtaaaagg	360
taagtatatg	accgcgacct	tggtcagtg	aaagaccggg	gaaatcctcg	ctaccaccca	420
acgacctacc	tttaatgcag	ataactaaag	aggaatcact	gaggactttg	tttggcgtga	480
tattctttat	caaagtaact	atgaaccagg	atcagccatg	aaggttatga	cgttagcttc	540
ttctattgat	aataatacct	tcccaagtgg	agaatacttc	aatagcagtg	aattcaaaat	600

```

agcggatgcg acgactcgag attgggatgt taatgatggt ttgactactg gtgggatgat 660
gactttctta caagggttctg ctactccag taatgttggg atgagtctac ttgaacaaaa 720
aatgggagat gctacttggg tggattatct aaaacgcttt aaatttgggg ttccaactcg 780
ctttggcttg acagatgaat acgctgggca gaatttcagt gacacaaaca caaatgcttc gtgcctttac 900
tcaaagctca tttgggcaag gaatttcagt gacacaaaca caaatgcttc ttatgatac 960
agctattgct aatgatggag ttatgctgga gccaaaattt ataagtgcta tttatgatac 960
taacaatcag tctgtacgta agtcacaaaa agaaatagta ggaaatcctg tttccaaaga 1020
ggcagcaagc acaactcgaa atcacatgat cttagtggg acggaccctc tatatggaac 1080
tatgtataat cactacacag gaaagccaat tataacagtt cctggacaaa atgtagcagt 1140
taaatacggg acggctcaaa tcgctgatga gaaaaatgga ggatacttgg ttggttctac 1200
caattatatt ttctcagttg tgactatgaa tcctgctgaa aatcctgatt ttatcttgta 1260
tgtaacgggt caacagcctg agcattatct aggtatccag ttgggagaat ttgccacccc 1320
aatcttggag cgggcttcag ctatgaaagt atctctcaat cttcaatctc cagccaaaaa 1380
tttagataaa gttacgacag aatcttctta tgcaatgcct agcatcaagg atatttcacc 1440
tggtgagttg gcggaagcct tacgccgaaa tattgtgcaa ccaatcggtg taggtactgg 1500
aacaagatt aaagagactt ctgtagaaga agggaccaat cttgcaccaa accaacaagt 1560
tctcctttta tcggataagg tagaagaaat tccagacatg tatggctgga aaaaagagac 1620
tgccgagacc tttgctaaat ggttggatat tgaactggaa tttgaagggt caggttccgt 1680
tgttcagaag

```

<210> 1044
 <211> 1668
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-11

```

<400> 1044
agttggaac tgcagaggtc aaggggattg attttacaac cagtcctaata cgtagttacc 60
caaacggaca atttgcttct agttttatcg gactagctca gctccatgaa aatgaagatg 120
gcagcaagag cttgctggga acctctggga tggagagttc tttaaataga attcttgcag 180
ggacagacgg cattattacc tatgaaaagg atcgtctggg aaatattgtc cccggaacgg 240
aacaagtttc ccaacaaacg gtagatggca aggatgttta tacgactatt tccagcacc 300
ttcagtcctt catggagacc cagatgaatg cctttcaaga aaaagtaaaa ggcaagtata 360
tgacggctac cttgggtcagt gctaaaacag gggaaattct tgcaacaacg caacggccga 420
ccttcgatgc tgatactaag gaaggactta ccaaggactt tgtttggcgt gatctctct 480
atcaaagtaa ctatgagcca gggtaacca tgaaggatcat gacgcttgct gctgctattg 540
ataataacac tttcccagga ggagaagttt tcaatagtag tgaattaaaa atagcggatg 600
cgacaattcg agattgggat gttaatgatg gtttgacgac tgggtgggatg atgactttct 660
tacaaggttt cgctcactcc agtaatgttg gaatgagtct acttgaacaa aaaatgggag 720
atgctacttg gttggattat ctaaaccgct ttaagtttgg ggtgccgacg cgttttgggtc 780
tgactgatga gtattcaggt caattgcctg cagataatat tgtaatatat gccatgagtg 840
catttgggtc ggggatttca gtgaccaga cgcaaatgat tcgtgccttt acagctattg 900
ctaattgatg tggtatgctg gagcctaaat ttattagtgc catttatgat ccaaatgatc 960
aaactgctcg gaaatctcaa aaagaaattg tgggaaatcc tgtttctaaa gatgcagcta 1020
gtctaactcg gactaacatg attttggtag ggacggatcc ggtttatgga accatgtata 1080
accacagcac aggtaaagcca actgtaactg ttctctggga aaatgtagcc ctcaagtctg 1140
gtacggctca gattgctgac gagaaaaatg gtggttatct agtcgggtta accaactata 1200
ttttctcggc tgtatcgatg aatccggctg aaaatcctga ttttatcttg tatgtaacgg 1260
tacagcaacc tgaacattat tcaggtatcc agttgggaga atttgccacc ccaatcttgg 1320
agcgggcttc agctatgaaa gaatctctca atcttcaatc tccagccaag aatttagata 1380
aagttacgac agaattctct tatgcaatgc ctatgcatca ggatatttca cctggtgagt 1440
tggcggaagc cttacgccga aatattgtgc aaccaatcgt tgtaggtact ggaacaaaga 1500
ttaagagac ttctgtagaa gaagggacca atcttgcacc aaaccaacaa gttctccttt 1560
tatcgataa ggtagaagaa attccagaca tgtatggctg gaaaaaagag actgctgaaa 1620
cctttgctaa atggttggat attgagctgg aatttgaagg gtcagggtt 1668

```

<210> 1045
 <211> 1680
 <212> DNA
 <213> Streptococcus pneumoniae strain StrR-12

```

<400> 1045
ttggaaactg cagagggtcaa ggggattgat tttacaacca gtcccaatcg tagttacca 60
aatggacaat ttgcttctag ttttatcggt ctatgctcag tccatgaaaa tgaagatgga 120
agcaagagtt tgctgggaac ctctggaatg gagagttcct tgaacagtat tcttgcaggg 180

```

```
acagacggca ttattaccta tgaaaaggat cgtctgggca atattgtacc cggaacagaa 240
caagtttccc aacaaacggg ggatggcaag gatgtttaca caaccatttc cagccccctc 300
cagtccttca tggaaactca gatggatgcc tttctagaaa aagtaaaagg taagtatatg 360
accgcgacct tggtcagtgc aaagaccggg gaaatcctcg ctaccacca acgacctacc 420
tttaatgcag atactaaaga aggaatcact gaggactttg tttggcgtga tattctttat 480
caaagtaact atgaaccagg atcagccatg aaggttatga cgttagcttc ttctattgat 540
aataatacct tcccaagtgg agaatacttc aatagcagtg aattcaaaat agcggatgcg 600
acgactcgag attgggatgt taatgatggg ttgactactg gtgggatgat gactttctta 660
caaggtttcg ctcactccag taatgttggg atgactctac ttgaacaaaa aatgggagat 720
gctacttggg tggattatct aaaacgcttt aaatttgggg ttccaactcg ctttggcttg 780
acagatgaat acgctgggtc acttccagct gataatattg ttagtattgc tcaaagctca 840
tttgggcaag gaatttcagt gacacaaaca caaatgcttc gtgcctttac agctattgct 900
aatgatggag ttatgctgga gccaaaattt ataagtgcga tttatgatac taacaatcag 960
tctgtacgta agtcacaaaa agaaatagta ggaatcctg tttccaaaga ggcagcaagc 1020
acaactcgaa atcacatgat cttagtgtgg acggaccctc tatatggaa ctaggtataat 1080
cactacacag gaaagccaat tataacagtt cctggacaaa atgtagcagt taaatccggt 1140
gcggctcaaa tcgctgatga gaaaaatgga ggatacttgg ttggttctac caattatatt 1200
ttctcagttg tgactatgaa tcctgctgaa aatcctgatt ttatcttgta tgtaacggtt 1260
caacagcctg agcattattc aggtatccag ttgggagaat ttgccacccc aatcttggag 1320
cgggcttcag ctatgaaaga atctctcaat cttcaatctc cagccaaaaa ttagataaaa 1380
gttacgacag aatcttctta tgcaatgcct agcatcaagg atatttcacc tggtagttg 1440
gcggaagcct tacgccgaaa tattgtgcaa ccaatcgttg taggtactgg aacaaagatt 1500
aaagagactt ctgtagaaga agggaccaat cttgcaccaa accaacaagt tctcctttta 1560
tcggataaag tagaagaaat tccagacatg tatggctgga aaaaagagac tgccgagacc 1620
tttgctaaat ggttgatat tgaactggaa tttgaagggt cagggtccgt tgttcagaag 1680
```

<210> 1046

<211> 1689

<212> DNA

<213> Streptococcus pneumoniae strain StrR-13

<400> 1046

```
aaaaaagagt tggaaactgc agaggtcaag gggattgatt ttacaaccag tcctaatacgt 60
agttacccaa acggacaatt tgcttctagt tttatcggtc tagctcaact ccatgaaaat 120
gaagatggaa gcaagagttt gctgggaact tctggaatgg agagttcctt gaacagtatt 180
cttgccagga aagacgggat tattacttat gaaaaggatc gtctgggtaa tattgtccct 240
ggaacagaac aagtttccca acaaacggta gatggcaagg atgtttatac aacattgtct 300
agtcgcctcc aatctttcat ggaaactcag atggatgcct ttctagaaaa agtaaaagg 360
aagtatatga ccgcgacctt ggtcagtgcg aagaccgggt aaatcctcgc taccaccaa 420
cgacctacct ttaatgcaga tactaaagaa ggaatcactg aggactttgt ttggcgtgat 480
attctttatc aaagtaacta tgaaccagga tcagccatga aggttatgac gtttagcttct 540
tctattgata ataatacctt cccaagtggg gaatacttca atagcagtga attcaaaata 600
gcggatgcga cgactcgaga ttgggatggt aatgatgggt tgactactgg tgggatgatg 660
actttcttac aaggtttcgc tcactccagt ggattatcta aaacgcttta aatttgggg 720
atgggagatg ctacttggtt cgctgggtcaa cttccagctg ataataattg tagtattgct 840
tttggcttga cagatgaata ggttctcagc aacacaaacac aaatgcttcg tgcctttaca 900
caaagctcat ttgggcaagg atgatggagt tatgctggag ccaaaattta taagtgctat ttatgatac 960
gctattgcta atgatggagt ctgtacgtaa gtcacaaaaa gaaatcctgt ttccaaagag 1020
aacaatcagt ctgtacgtaa caactcgaaa tcacatgatc ttagttggga cggaccctct atatggaact 1080
gcagcaagca caactcgaaa actacacagg aaagccaatt ataacagttc ctggacaaaa tgtagcagtt 1140
atgtataatc cggtcctaat cgctgatgag aaaaatggag gatacttggg tggttctacc 1200
aaatccggta aattatattt tctcagttgt gactatgaat cctgctgaaa atcctgattt tatcttgat 1260
gtaacggttc aacagcctga gcattattca ggtatccagt tgggagaatt tgccacccca 1320
atcttggagc atcttggagc gggcttcagc tatgaaagaa tctctcaatc ttcaatctcc agccaaaaat 1380
ttagataaag ttacgcacaga atcttcttat gcaatgccta gcatcaagga tatttcacct 1440
ggtgagttgg cggaagcctt acgcgcgaat attgtgcaac caatcgttgt aggtactgga 1500
acaaagatta aagagacttc tgtagaagaa gggaccaatc ttgcaccaa ccaacaagtt 1560
ctccttttat cggataaggt agaagaaatt ccagacatg atggctggaa aaaagagact 1620
cccagacctt ttgctaaatg gttggatatt gaactggaat ttgaagggtc aggttccgtt 1680
gttcagaag
```

<210> 1047

<211> 1690

<212> DNA

<213> Streptococcus pneumoniae strain StrR-14

<400> 1047

```

caaaaaagaa ttggaagctg cagagggtcaa ggggattgat tttacaacca gtcccaaccg 60
tagttaccca aacggacaat ttgcttctag ttttatcgga ctagctcagc tccatgaaaa 120
tgaagatggc agcaagagct tgctgggaac ttctggaatg gagagttcct tgaacagtat 180
tcttgccaggg acagacggca ttattaccta tgaaaaggat cgtctgggta atattgtacc 240
cggaacagaa caagtttccc aacaaacggg agatggcaag gatgtttaca caaccatttc 300
cagccccctc cagtccttta tggaaccca gatggatgct tttcaagaga aggtaaaagg 360
aaagtacacg acagcgactt tggtcagtgc taaaacaggg gaaattcttg caacaacgca 420
acgaccgacc tttgatgcag atacaaaaga aggcattaca gaggactttg tttggcgtga 480
tatcctttac caaagtaact atgagccagg ttcccctatg aaagtgatga tgttggtgc 540
tgctattgat aataatacct ttccaggggg agaagtcttc aatagtagtg agttaaaaa 600
tgcagatgtc acgattcgag attgggacgt caatgaagga ttgactgggt gcagaatgat 660
gaccttttct caagggttctg ctactcaag taacgttggg atgacgcttc ttgagcaaaa 720
gatgggagat gctacatggc ttgattatct aaatcgcttt aaatttgggt ttccgactcg 780
ttttggcttg acggatgaat atgcaggcca acttcagct gacaatatcg taaatattgc 840
tcagagttca tttggacaag ggatttcagc gaccagacg caaatgattc gtgccttcac 900
ggctattgcc aacgatggag tcatgttaga acctaaattt atcagtcca tttatgatcc 960
aaatgatcaa actgctcgga aatcacaaa agaagtgtg ggaatcctg tgtctaaaaga 1020
tgcagcgagc ttgacgcgaa cgcataatgg tttagtcggg accgatccag tatatggaac 1080
tatgtataat cataagacag ggaacccaac tgtaactgtt cctgggcaaa atgtagccct 1140
caagtctggg acggctcaga ttgccgatga gaaaaatgga gggtacttag ttggtacgac 1200
caattacatt ttttcggctg tatcgatgaa ccctgctgaa aatcctgatt ttattctcta 1260
tgtgacgggt caacagcctg agcattattc aggtattcag ttgggggaat ttgccaatcc 1320
tatcttggaa agggcagtgg ctatgaaaga ttcccttaac ctccaatcta ccgctaaaac 1380
gttaaatcag gtaaccaatc aaagcgctta tgccatgcct agcatcaagg acatttcacc 1440
tgggcatttg gcggaagcct tacgtcgcaa tattgtgcaa ccaatcgctg taggaacagg 1500
aacaaaaatt aaagaatcat ctgtagaaga agggacggat cttgcaccta accagcaagt 1560
tcttctctta tctgataaag cagaggaagt tccagatatg tatggttgga caaaagagac 1620
tgcagagacc tttgctaagt ggctcaatat agaacttgaa tttgaagggt cgggctctac 1680
tgtgcagaag                                     1690

```

<210> 1048

<211> 1682

<212> DNA

<213> Streptococcus pneumoniae strain StrR-15

<400> 1048

```

aaaagagttg gaaactgcag aggtcaaggg gattgatttt acaaccagtc ccaatcgtag 60
ttacccaaac ggacaatttg cttctagctt tattggctta gcccaacttc atgaaaatga 120
ggatggtagt aagagtttgt tagggacttc tggtttggag agttctttaa ataccattct 180
tgctgggaca gacggtatta ttacctatga aaaagaccgt gtaggaaata tcgtaccagg 240
tacagaactg gtatcgcaac aaactgtgga tggcaaggat gtttatacaa cattgtctag 300
tccgctacaa tctttcatgg aaactcagat ggatgccttt ctagaaaaag taaaaggtaa 360
gtatatgacc gcgaccttgg tcagtgcmaa gaccggtgaa atcctcgcta ccaccaacg 420
acctaccttt aatgcagata cttaaagaagg aatcactgag gactttgttt ggcgtagat 480
tctttatcaa agtaactatg aaccaggatc agccatgaag gttatgacgt tagcttcttc 540
tattgataat aataccttcc caagtggaga atacttcaat agcagtgaat tcaaaatagc 600
ggatgcgacg actcgagatt gggatgttaa tgaaggtttg actactgggt ggatgatgac 660
tttcttaciaa ggtttcgctc actccagtaa tgttggaaat agtctacttg aacaaaaaat 720
gggagatgct acttggttgg attatctaaa acgctttaa tttggggttc caactcgctt 780
tggcttgaca gatgaatacg ctggtcaact tccagctgat aatattgtta gtattgctca 840
aagctcattt gggcaaggaa tttcagtgac acaaacacaa atgcttcgtg cctttacagc 900
tattgctaata gatggagtta tgctggagcc aaaatttata agtgctattt atgatactaa 960
caatcagttc gtacgtaagt cacaaaaaga aatagtagga aatcctgttt ccaaagaggc 1020
agcaagcaca acatgaaatc acatgatcct aacagttcct ggacaaaatg tagcagttaa 1080
gtataatcac tacacaggaa agccaattat aacagttcct ggacaaaatg tagcagttaa 1140
atccggtacg gctcaaactc ctgatgagaa aaatggagga tacttgggtt gttctaccaa 1200
ttatattttc tcagttgtga ctatgaatcc tgctgaaaa cctgatttta tcttgtatgt 1260
aacggttcaa cagcctgagc attattcagg tatccagttg ggagaatttg ccaaccaaat 1320
cttggagcgg gcttcagcta tgaagaatc tctcaatctt caatctccag ccaaaaaatt 1380
agataaagtt acgacagaat cttcttatgc aatgcctagc atcaaggata tttcacctgg 1440
tgagttggcg gaagccttac gccgaaatat tgtgcaacca atcgttgtag gtactggaac 1500

```

aaagattaaa gagactttctg tagaagaagg gaccaatctt gcaccaaacc aacaagttct 1560
 ccttttatcg gataaggtag aagaaattcc agacatgtat ggctggaaaa aagagactgc 1620
 tgaaaccttt gctaaatggg tggatattga gttggaattt gaaggttcag gttccgctcg 1680
 tc 1682

<210> 1049

<211> 1241

<212> DNA

<213> Enterococcus faecium strain R690

<400> 1049

gcagcgttgc gtgataccgt tgaaaaaac attaaaaact gtttggattt tgaaaggaga 60
 caggagcatg aatagaataa aagttgcaat actgtttggg gggtgctcag aggagcatga 120
 cgtatcggta aaatctgcaa tagagatagc cgctaacatt aataaagaaa aatacagagcc 180
 gttatacatt ggaattacga aatctgggtg atggaaaaatg tgcgaaaaac cttgcgcgga 240
 atgggaaaaac gacaattgct attcagctgt actctcgccg gataaaaaaa tgcacggatt 300
 acttggttaa aagaaccatg aatatgaaat caaccatgtt gatgtagcat tttcagcttt 360
 gcatggcaag tcagggtgaag atggatccat acaaggctctg tttgaattgt ccggtatccc 420
 tttttagggc tgcgatattc aaagctcagc aatttgtatg gacaaatcgt tgacatacat 480
 cgttgcgaaa aatgctggga tagctactcc cgccttttgg gttattaata aagatgatag 540
 gccggtggca gctacgttta cctatcctgt tttgtttaag ccggcgcggt caggctcatc 600
 ctccggtgtg aaaaaagtca atagcgcgga cgaattggac tacgcaattg aatcggcaag 660
 acaatatgac agcaaaatct taattgagca ggctgtttcg ggctgtgagg tcggttgtgc 720
 ggtattggga aacagtgccg cgtagctgtg tggcagagggtg gaccaaataca ggctgcagta 780
 cggaatcttt cgtattcatc aggaagtcca gccgaaaaaa ggctctgaaa acgcagttat 840
 aaccgttccc gcagaccttt cagcagagga gcgaggacgg atacaggaaa cggcaaaaaa 900
 aatatataaa gcgctcggct gtagaggctt agcccgtgtg gatattgttt tacaagataa 960
 cggccgcatt gtactgaacg aagtcaatac tctgcccggt ttcacgtcat acagtcgtta 1020
 tccccgtatg atggccgctg cagggtattgc acttcccga ctgattgacc gcttgatcgt 1080
 attagcgtaa aaggggtgat aagcatggaa ataggattta cttttttaga tgaaatagta 1140
 cacggtgttc gttgggacgc taaatatgcc acttgggata atttcaccgg aaaaccggtt 1200
 gacggttatg aagtaaatcg cattgtaggg acatacgaat t 1241

<210> 1050

<211> 1249

<212> DNA

<213> Enterococcus gallinarum strain R691

<400> 1050

tcacaccgca tacggcctat tataccgagc aagcgttgcg tgataccgtt gaaaaaacca 60
 ttaaaaaactg tttggatttt gaaaggagac aggagcatga atagaataaa agttgcaata 120
 ctgtttgggg gttgctcaga ggagcatgac gtatcggtaa aatctgcaat agagatagcc 180
 gctaacatta ataaagaaaa atacgagccg ttatacattg gaattacgaa atctgggtga 240
 tggaaaaatgt gcgaaaaaac ttgcgcggaa tgggaaaaacg acaattgcta ttcagctgta 300
 ctctcgccgg ataaaaaaat gcacggatta cttgttaaaa agaaccatga atatgaaatc 360
 aaccatgttg atgtagcatt ttcagctttg catggcaagt cagggtgaaga tggatccata 420
 caaggctctgt ttgaattgtc cggtatccct tttgtaggct gcgatattca aagctcagca 480
 atttgtatgg acaaatcggt gacatacatc gttgcgaaaa atgctgggat agctactccc 540
 gcctttttggg ttattaataa agatgatagg ccggtggcag ctacgtttac ctatcctgtt 600
 tttgttaagc cggcgcgttc aggtcctatc ttcggtgtga aaaaagtcaa tagcgcggac 660
 gaattggact acgcaattga atcggcaaga caatatgaca gcaaaatctt aattgagcag 720
 gctgtttcgg gctgtgaggt cggttgtgct gtattgggaa acagtgccgc gttagctgtt 780
 ggcgaggtgg accaaatcag gctgcagttac ggaatctttc gtattcatca ggaagtcgag 840
 ccgaaaaaag gctctgaaaa cgcagttata accgttcccg cagacctttc agcagaggag 900
 cgaggacgga tacaggaaac ggcaaaaaaa atatataaag cgctcggctg tagagggtcta 960
 gcccggtgtg atatgttttt acaagataac ggcgcgattg tactgaacga agtcaatact 1020
 ctgccccggt tcacgtcata cagtcgttat ccccgatga tggccgctgc aggtattgca 1080
 cttcccgaac tgattgaccg cttgatcgta ttagcgtaa aggggtgata agcatggaaa 1140
 taggatttac ttttttagat gaaatagtag acggtgttcg ttgggacgct aaatatgcc 1200
 cttgggataa tttcaccgga aaaccggttg acggttatga agtaaatcg 1249

<210> 1051

<211> 1272

<212> DNA

<213> Enterococcus faecium strain R481

<400> 1051

```
tataccgagc aagcggttgcg tgataccggt gaaaaaacca ttaaaaactg tttggatttt 60
gaaaggagac aggagcatga atagaataaa agttgcaata ctgtttgggg gttgctcaga 120
ggagcatgac gtatcggtaa aatctgcaat agagatagcc gctaacatta ataaagaaaa 180
atacgagccg ttatacattg gaattacgaa atctggtgta tggaaaatgt gcgaaaaacc 240
ttgcgcggaa tgggaaaaacg acaattgcta ttcagctgta ctctcgccgg ataaaaaat 300
gcacggatta cttgttaaaa agaaccatga atatgaaatc aaccatgttg atgtagcatt 360
ttcagctttg catggcaagt caggtgaaga tggatccata caaggtctgt ttgaattgtc 420
cggtatccct tttgtaggct gcgatattca aagctcagca atttgtatgg acaaatcggt 480
gacatacatc gttgcgaaaa atgctgggat agctactccc gccttttggg ttattaataa 540
agatgatagg ccggtggcag ctacgtttac ctatcctgtt tttgttaagc cggcgcgttc 600
aggctcatcc ttcggtgtga aaaaagtcaa tagcgcggac gaattggact acgcaattga 660
atcggcaaga caatatgaca gcaaatctt aattgagcag gctgtttcgg gctgtgaggt 720
cggttgtgcg gtattgggaa acagtgccgc gttagttgtt ggcgaggtgg accaaatcag 780
gctgcagtac ggaatctttc gtattcatca ggaagtcgag ccggaaaaag gctctgaaaa 840
cgcagttata accgttcccc cagacctttc agcagaggag cgaggacgga tacaggaaac 900
ggcaaaaaaa atatataaag cgctcggctg tagaggtcta gcccggtgtg atatgttttt 960
acaagataac ggccgcattg tactgaacga agtcaatact ctgcccggtt tcacgtcata 1020
cagtcgttat ccccgatga tggccgctgc aggtattgca cttcccgaac tgattgaccg 1080
cttgatcgta ttagcgtaa aggggtgata agcatggaaa taggatttac ttttttagat 1140
gaaatagtac acggtgttcg ttgggacgct aaatatgcca cttgggataa tttcaccgga 1200
aaaccggttg acggttatga agtaaategc attgtagggg catacgaatt ggcttgaatc 1260
gctttttgaa gg                                     1272
```

<210> 1052

<211> 1237

<212> DNA

<213> Enterococcus faecium strain R492

<400> 1052

```
tccccggcga tacggcctat tataccgagc aagcggttgcg tgataccggt gaaaaaacca 60
ttaaaaactg tttggatttt gaaaggagac aggagcatga atagaataaa agttgcaata 120
ctgtttgggg gttgctcaga ggagcatgac gtatcggtaa aatctgcaat agagatagcc 180
gctaacatta ataaagaaaa atacgagccg ttatacattg gaattacgaa atctggtgta 240
tggaaaatgt gcgaaaaacc ttgcgcggaa tgggaaaaacg acaattgcta ttcagctgta 300
ctctcgccgg ataaaaaaat gcacggatta cttgttaaaa agaaccatga atatgaaatc 360
aaccatgttg atgtagcatt ttcagctttg catggcaagt caggtgaaga tggatccata 420
caaggtctgt ttgaattgtc cggtatccct tttgtaggct gcgatattca aagctcagca 480
atgtgtatgg acaaatecgtt gacatacatc gttgcgaaaa atgctgggat agctactccc 540
gccttttggg ttattaataa agatgatagg ccggtggcag ctacgtttac ctatcctgtt 600
tttgttaagc cggcgcgttc aggctcatcc ttcggtgtga aaaaagtcaa tagcgcggac 660
gaattggact acgcaattga atcggcaaga caatatgaca gcaaatctt aattgagcag 720
gctgtttcgg gctgtgaggt cggttgtgcg gtattgggaa acagtgccgc gttagctgtt 780
ggcgaggtgg accaaatcag gctgcagtac ggaatctttc gtattcatca ggaagtcgag 840
ccggaaaaag gctctgaaaa cgcagttata accgttcccc cagacctttc agcagaggag 900
cgaggacgga tacaggaaac ggcaaaaaaa atatataaag cgctcggctg tagaggtcta 960
gcccggtgtg atatgttttt acaagataac ggccgcattg tactgaacga agtcaatact 1020
ctgcccggtt tcacgtcata cagtcgttat ccccgatga tggccgctgc aggtattgca 1080
cttcccgaac tgattgaccg cttgatcgta ttagcgtaa aggggtgata agcatggaaa 1140
taggatttac ttttttagat gaaatagtac acggtgttcg ttgggacgct aaatatgcca 1200
cttgggataa tttcaccgga aaaccggttg acggtta                                     1237
```

<210> 1053

<211> 1263

<212> DNA

<213> Enterococcus faecium strain R581

<400> 1053

```
catacggcct attataccga gcaagcggtg cgtgataccg ttgaaaaaac cattaaaaac 60
tgtttggatt ttgaaaggag acaggagcat gaatagaata aaagttgcaa tactgtttgg 120
gggttgctca gaggagcatg acgtatcggt aaaatctgca atagagatag ccgctaacat 180
```

```
taataaagaa aaatacgagc cgttatacat tgggaattacg aaatctggtg tatggaaaaat 240
gtgcgaaaaa ccttgccgcg aatgggaaaaa cgacaattgc tattcagctg tactctcgcc 300
ggataaaaaa atgcacggat tacttggttaa aaagaaccat gaatatgaaa tcaaccatgt 360
tgatgtagca ttttcagctt tgcattggcaa gtcagggtgaa gatggatcca tacaagggtct 420
gtttgaattg tccggtatcc cttttgtagg ctgcgatatt caaagctcag caatttgtat 480
ggacaaatcg ttgacataca tcggtgcgaa aaatgctggg atagctactc ccgccttttg 540
ggttattaat aaagatgata ggccggtggc agctacgttt acctatcctg tttttgttaa 600
gccggcgcg tccaggtcat ccttcggtgt gaaaaaagtc aatagcgcgg acgaattgga 660
ctacgcaatt gaatcggcaa gacaatatga cagcaaaatc ttaattgagc aggtctgttc 720
gggctgtgag gtcggttggt cggtattggg aaacagtgcc gcgttagctg ttggcgagggt 780
ggaccaaatac aggtcgcagt acggaatctt tcgtattcat caggaagtcg agccggaaaa 840
aggctctgaa aacgcagtta taaccgttcc cgcagacctt tcagcagagg agcgaaggacg 900
gatacaggaa acggcaaaaa aaatatataa agcgctcggc tgtagagggtc tagcccggtg 960
ggatatgttt ttacaagata acggccgcat tgtactgaac gaagtcaata ctctgcccg 1020
tttcacgtca tacagtcggt atccccgtat gatggccgct gcagggtattg cacttcccga 1080
actgattgac cgcttgatcg tattagcggt aaaggggtga taagcatgga aataggattt 1140
acttttttag atgaaatagt acacggtgtt cggtgggacg ctaaatatgc cacttgggat 1200
aatttcaccg gaaaaccggt tgacgggtat gaaagtaaat cgcatgtag ggacattcga 1260
att 1263
```

<210> 1054
<211> 1232
<212> DNA
<213> Enterococcus faecalis R610

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents any nucleotide

```
<400> 1054
cgccctatta tnccgagcaa gcgttgcggtg ataccggtga aaaaaccatt aaaaactggt 60
tggattttga aaggagacag gagcatgaat agaataaaaag ttgcaatact gtttgggggt 120
tgctcagagg agcatgacgt atcggtaaaa tctgcaatag agatagccgc taacattaat 180
aaagaaaaat acgagccggt atacattgga attacgaaat ctggtgtatg gaaaatgtgc 240
gaaaaaacctt gcgcggaatg ggaaaaacgac aattgctatt cagctgtact ctgcgccgat 300
aaaaaaatgc acggattact tgtaaaaaag aaccatgaat atgaaatcaa ccatgttgat 360
gtagcatttt cagctttgca tggcaagtcg ggtgaagatg gatccataca aggtctgttt 420
gaattgtccg gtatcccttt tgtaggctgc gatattcaaa gctcagcaat ttgtatggac 480
aaatcggtga catacatcgt tgcgaaaaat gctgggatag ctactcccgc cttttgggtt 540
attaataaag atgataggcc ggtggcagct acggttacct atcctgtttt tgtaagccg 600
gcgcggttcag gctcatcctt cggtgtgaaa aaagtcaata gcgcggacga attggactac 660
gcaattgaat cggcaagaca atatgacagc aaaatcctaa ttgagcaggc tgtttcgggc 720
tgtgagggtc gttgtgcggt attgggaaac agtcgcgct tagttgttgg cgaggtggac 780
caaatcaggc tgcagtacgg aatccttctgt attcatcagg aagtcgagcc ggaaaaaggc 840
tctgaaaacg cagttataac cgttcccgcg gacctttcag cagaggagcg aggacggata 900
caggaaaacg caaaaaaaat atataaagcg ctcggtctga gaggtctagc ccgtgtggat 960
atgtttttac aagataacgg ccgcattgta ctgaacgaag tcaataactc gcccggtttc 1020
acgtcataca gtcgttatcc ccgtatgatg gccgctgcag gtattgcact tcccgaactg 1080
attgaccgct tgatcggtatt agcggttaag ggggtgataag catggaaata ggatttactt 1140
tttttagatg aatagtacac ggtgttcggt gggacgctaa atatgccact tgggataaatt 1200
tcaccggaaa accggttgac ggttataagt aa 1232
```

<210> 1055
<211> 1218
<212> DNA
<213> Enterococcus gallinarum strain R684

```
<400> 1055
taccgagcaa gcgttgcggtg ataccggtga aaaaaccatt aaaaactggt tggattttga 60
aaggagacag gagcatgaat agaataaaaag ttgcaatact gtttgggggt tgctcagagg 120
agcatgacgt atcggtaaaa tctgcaatag agatagccgc taacattaat aaagaaaaat 180
acgagccggt atacattgga attacgaaat ctggtgtatg gaaaatgtgc gaaaaacctt 240
gcgcggaatg ggaaaaacgac aattgctatt cagctgtact ctgcgccgat aaaaaaatgc 300
```



```
acggattact tgttaaaaag aaccatgaat atgaaatcaa ccatgttgat gtagcatttt 360
cagcttttgca tggcaagtca ggtgaagatg gatccataca aggtctgttt gaattgtccg 420
gtatcccttt tgtaggctgc gatattcaaa gctcagcaat ttgtatggac aaatcgttga 480
catacatcgt tgcgaaaaat gctgggatag ctactccgc cttttgggtt attaataaag 540
atgataggcc ggtggcagct acgtttacct atcctgtttt tgttaagccg gcgcgttcag 600
gctcatcctt cgggtgtgaaa aaagtcaata gcgcggacga attggactac gcaattgaat 660
cggcaagaca atatgacagc aaaatcttaa ttgagcaggc tgtttcgggc tgtgaggtcg 720
gttgtgcggt attgggaaac agtgccgcgt tagctgttgg cgaggtggac caaatcaggc 780
tgcagtacgg aatctttcgt attcatcagg aagtcgagcc ggaaaaaggc tctgaaaacg 840
cagttataac cgttcccgc gacctttcag cagaggagcg aggacggata caggaaaacg 900
caaaaaaaat atataaagcg ctccgctgta gaggtctagc ccgtgtggat atgtttttac 960
aagataacgg ccgcattgta ctgaacgaag tcaatactct gcccggtttc acgtcataga 1020
gtcgttatcc ccgtatgatg gccgtgcag gtattgcact tcccgaactg attgaccgct 1080
tgatcgtatt agcgttaaag ggggtgataag catggaaata ggatttactt ttttagatga 1140
aatagtagac ggtgttcggt gggacgctaa atatgccact tgggataatt tcaccgaaa 1200
accggttgac ggtagaa 1218
```

<210> 1056

<211> 1265

<212> DNA

<213> *Enterococcus faecium* strain R688

<400> 1056

```
aatcacaccg catacggcct attataccga gcaagcggtg cgtgataccg ttgaaaaaac 60
cattaaaaac tgtttggatt ttgaaaggag acaggagcat gaatagaata aaagttgcaa 120
tactgttttg ggttgctca gaggagcatg acgtatcggt aaaatctgca atagagatag 180
ccgctaaccat taataaagaa aaatacagac cgttatacat tgggaattacg aaatctggtg 240
tatggaaaat gtgcgaaaaa ccttgccgcg aatgggaaaa cgacaattgc tattcagctg 300
tactctcgcc ggataaaaaa atgcacggat tacttgtaa aaagaacat gaatatgaaa 360
tcaacatgt tgatgtagca ttttcagctt tgcattggca gtcagggtgaa gatggatcca 420
tacaaggtct gtttgaattg tccggtatcc cttttgtagg ctgcgatatt caaagctcag 480
caatttgtat ggacaaatcg ttgacataca tcgttgcgaa aaatgctggg atagctactc 540
ccgccttttg ggttattaat aaagatgata ggccgggtgg agctacgttt acctatcctg 600
tttttgttaa gccggcgcggt tcaggctcat ccttcggtgt gaaaaaagtc aatagcgcg 660
acgaattgga ctacgcaatt gaatcggcaa gacaatatga cagcaaaatc ttaattgagc 720
aggctgtttc gggctgtgag gtcggttggt cggtattggg aaacagtgcc gcgttagctg 780
ttggcgaggt ggaccaaate aggtcgcagt acggaatctt tcgtattcat caggaagctg 840
agccggaaaa aggtcttgaa aacgcagtta taaccgttcc cgcagacctt tcagcagagg 900
agcgaggacg gatacaggaa acggcaaaaa aaatatataa agcgctcggc tgtagaggtc 960
tagcccggtg ggatatgttt ttacaagata acggccgcat tgtactgaac gaagtcaata 1020
ctctgcccg tttcacgtca tacagtcggt atccccgtat gatggccgct gcaggtattg 1080
cacttcccga actgattgac cgcttgatcg tattagcggt aaaggggtga taagcatgga 1140
aataggattt acttttttag atgaaatagt acacggtgtt cgttgggacg ctaaatatgc 1200
cacttgggat aatttcaccg gaaaaccggg tgacggttat gaagtaaatc gcattgtagg 1260
gacat 1265
```

<210> 1057

<211> 1269

<212> DNA

<213> *Enterococcus flavescens* strain R689

<400> 1057

```
tcacaccgca tacggcctat tataccgagc aagcgttgcg tgataccgtt gaaaaaacca 60
ttaaaaaactg tttggatttt gaaaggagac aggagcatga atagaataaa agttgcaata 120
ctgtttgggg gttgctcaga ggagcatgac gtatcggtaa aatctgcaat agagatagcc 180
gctaaccatta ataaagaaaa atacgagccg ttatacattg gaattacgaa atctggtgta 240
tgaaaaatgt gcgaaaaacc ttgcgcggaa tgggaaaaacg acaattgcta ttcagctgta 300
ctctcgccgg ataaaaaaat gcacggatta cttgttaaaa agaaccatga atatgaaatc 360
aaccatgttg atgtagcatt ttcagctttg catggcaagt caggtgaaga tggatccata 420
caaggtctgt ttgaattgtc cggatccctt tttgtaggct gcgatattca aagctcagca 480
atltgtattg acaaatcggt gacatacatc gttgcgaaaa atgctgggat agctactccc 540
gccttttggg ttattataaa agatgatagg ccgggtggcag ctacgtttac ctatcctggt 600
tttgtttaagc cggcgcggtt aggtcatcc ttcggtgtga aaaaagtcaa tagcgcgac 660
gaattggact acgcaattga atcggcaaga caatatgaca gcaaaatctt aattgagcag 720
```

```
gctgttttcgg gctgtgaggt cggttgtgcg gtattgggaa acagtgccgc gttagctgtt 780
ggcgaggtgg accaaatcag gctgcagtac ggaatctttc gtattcatca ggaagtgcag 840
ccggaaaaaag gctctgaaaa cgcagttata accgttcccc cagacctttc agcagaggag 900
cgaggacgga tacaggaaac ggcaaaaaaa atataaaag cgctcggctg tagaggtcta 960
gcccgtgtgg atatgttttt acaagataac ggccgcattg tactgaacga agtcaatact 1020
ctgcccgggtt tcacgtcata cagtcgttat ccccgatga tggccgctgc aggtattgca 1080
cttcccgaac tgattgaccg cttgatcgta ttagcgtaa aggggtgata agcatggaaa 1140
taggattttac ttttttagat gaaatagtac acggtgttcg ttgggacgct aaatatgcca 1200
cttgggataa tttcaccgga aaaccggttg acggttatga agtaaatcgc attgtaggga 1260
catacgaat 1269
```

<210> 1058

<211> 1169

<212> DNA

<213> Enterococcus gallinarum strain R420

<400> 1058

```
caaattttct tttcttttcc taggtacact gaatgtaacc ttaaaagaaa aaaggaaagg 60
aagaaaaatga tgaaaaaaat tgccgtttta tttggaggga attctccaga atactcagtg 120
tactaacct cagcagcaag tgtgatccaa gctattaacc cgctgaaata tgaagtaatg 180
accattggca tcgcaccaac aatggattgg tattggtatc aaggaaacct cgcgaaatgtt 240
cgcaatgata cttggctaga agatcacaaa aactgtcacc agctgacttt ttctagccaa 300
ggattttatat taggagaaaa acgaatcgtc cctgatgtcc tctttccagt cttgcatggg 360
aagtatggcg aggatggctg tatccaagga ctgcttgaa taatgaacct gccttatgtt 420
ggttgccatg tcgctgcctc cgcattatgt atgaacaaat ggctcttgca tcaacttgct 480
gataccatgg gaatcgctag tgctccact ttgcttttat cccgctatga aaacgatcct 540
gccacaatcg atcgttttat tcaagaccat ggattcccga tctttatcaa gccgaatgaa 600
gccggttctt caaaagggat cacaaaagta actgacaaaa cagcgctcca atctgcatta 660
acgactgctt ttgcttacgg ttctactgtg ttgatccaaa aggcgatagc gggatttgaa 720
attggctgcg gcatcttagg aaatgagcaa ttgacgattg gtgcttgta tgcgatttct 780
cttgctgacg gtttttttga ttttgaagag aaataccaat taatcagcgc cagcatcact 840
gtcccagcac cattgcctct cgcgcttgaa tcacagatca aggagcaggc acagctgctt 900
tatcgaaact tgggattgac gggctctggct cgaatcgatt ttttcgtcac caatcaagga 960
gcgattttatt taaacgaaat caacaccatg ccgggattta ctgggcactc ccgctaccca 1020
gctatgatgg cggaagtcgg gttatcctac gaaatattag tagagcaatt gattgcactg 1080
gcagaggagg acaaacgatg aacacattac aattgatcaa taaaaccat ccattgaaaa 1140
aaaatcaaga gccccgcac ttagtgcta 1169
```

<210> 1059

<211> 1166

<212> DNA

<213> Enterococcus gallinarum strain R631

<400> 1059

```
caaattttct tttcttttcc taggtacact gaatgtaacc ttaaaagaaa aaaggaaagg 60
aagaaaaatga tgaaaaaaat tgccgtttta tttggaggga attctccaga atactcagtg 120
tactagcct cagcagcaag tgtgatccaa gctattgacc cgctgaaata tgaagtaatg 180
accattggca tcgcaccaac aatggattgg tattggtatc aaggaaacct cgcgaaatgtt 240
cgcaatgata cttggctaga agatcacaaa aactgtcacc agctgacttt ttctagccaa 300
ggattttatat taggagaaaa acgaatcgtc cctgatgtcc tctttccagt cttgcatggg 360
aagtatggcg aggatggctg tatccaagga ctgcttgaa taatgaacct gccttatgtt 420
ggttgccatg tcgctgcctc cgcattatgt atgaacaaat ggctcttgca tcaacttgct 480
gataccatgg gaatcgctag tgctccact ttgcttttat cccgctatga aaacgatcct 540
gccacaatcg atcgttttat tcaagaccat ggattcccga tctttatcaa gccgaatgaa 600
gccggttctt caaaagggat cacaaaagta actgacaaaa cagcgctcca atctgcatta 660
acgactgctt ttgcttacgg ttctactgtg ttgatccaaa aggcgatagc gggatttgaa 720
attggctgcg gcatcttagg aaatgagcaa ttgacgattg gtgcttgta tgcgatttct 780
cttgctgacg gtttttttga ttttgaagag aaataccaat taatcagcgc cagcatcact 840
gtcccagcac cattgcctct cgcgcttgaa tcacagatca aggagcaggc acagctgctt 900
tatcgaaact tgggattgac gggctctggct cgaatcgatt ttttcgtcac caatcaagga 960
gcgattttatt taaacgaaat caacaccatg ccgggattta ctgggcactc ccgctaccca 1020
gctatgatgg cggaagtcgg gttatcctac gaaatattag tagagcaatt gattgcactg 1080
gcagaggagg acaaacgatg aacacattac aattgatcaa taaaaccat ccattgaaaa 1140
aaaatcaaga gccccgcac ttagtg 1166
```

<210> 1060
 <211> 1028
 <212> DNA
 <213> Enterococcus casseliflavus ATCC 25788

```
<400> 1060
aacatgaaaa aaatcgccctt atttttggag gcaattcacc ggaatacacc gtttcttttag 60
cttcagcaac tagcgcaatc gaagcactcc aatcatctcc ctatgactac gacctctctt 120
tgatcgggat cgccccagat gctatggatt ggtacttgta tacaggagaa ctggaaaaaca 180
tccgacaaga cacgtgggtt ttggatacga aacataaaca gaaaatacag ccgctattcg 240
aaggaaacgg cttttggcta agtgaagagc agcaaacggt ggtacctgat gttttatttc 300
ccattatgca tggcaaatac ggggaagatg gcagtatcca aggattggtt gaattgatga 360
agctgcctta tgtaggctgc ggggtggcag gttctgcctt atgtatgaac aaatggctgc 420
tgcatacaagc tgcagcagcc attggcgctac aaagtgcctc tacgattctc ttgacaaatc 480
aagccaacca gcaagaacaa atcgaagcctt ttatccagac ccatggcttc ccagttttct 540
ttaagcctaa tgaagcgggc tcctcaaaag ggatcactaa agtcacctgc gttgaagaaa 600
tcgcttctgc cttaaaagaa gcctttactt attgttccgc agtgctccta caaaaaata 660
ttgccgggtg tgagatcggg tgcgggtatt ttgggcaacga ctctttgact gtcggtgctt 720
gtgacgcatc ttcatagta gacggctttt tgcattttga agaaaagtac cagctgatca 780
gcgcaaaaat caccgtccct gcgccattgc ctgaaacgat tgaaaccaag gtcaaagaac 840
aagctcagct gctctatcgt agtctttggtc ttaaaggctc tgctcgcatc gacttttttg 900
tcacggagcg aggagaacta tacttgaatg aaatcaatac tatgccgggc tttacgagtc 960
actcccgcta tcctgccatg atggcagcgg tcggctttat ctatcaagaa ctactacaaa 1020
aactgctt                                     1028
```

<210> 1061
 <211> 1030
 <212> DNA
 <213> Enterococcus casseliflavus strain R689

```
<400> 1061
aatatgaaaa aaatcgccctt atttttggag gcaattcacc ggagtacgcc gtttcttttag 60
cctcagcaac tagcgcaatc gaagcactcc aatcatctcc cgatgactat gacctctctt 120
tgatcgggat cgccccagat gctatggatt ggtatttgta tacaggagaa ctggaaaaaca 180
tccgacaaga cacgtgggtt ttggatacga aacataaaca gaaaatccag ccgctttttg 240
aaggaaacgg cttttggcta agtgaagagc aacaaacggt ggttcctgat gttttatttc 300
ccattatgca tggcaaatac ggggaagatg gcagtatcca aggattggtt gaattgatga 360
aactacctta tgtaggctgc ggggtggcag cctctgcctt atgtatgaac aaatggctgc 420
tgcatacaagc agcagaagcg attggcgctac aaagtgcctc tacgattctc ttgacaaatc 480
aagccaacca gcaagatcaa atcgaagcctt ttatccagac ccatggcttc ccggtttttt 540
ttaagcctaa tgaagcgggc tcctcaaaag ggatcactaa agtcacctgc gttgaagaaa 600
tcgcttctgc cttaaaagaa gcctttactt attgttcagc agtgctccta caaaaaata 660
ttgccgggtg tgagatcggg tgcgggtatt ttgggcaacga ctctttgact gtcggtgctt 720
gtgacgctat ttcatagta gacggctttt tgcattttga agaaaagtac cagctgatca 780
gcgccaagat caccgttcct gcaccattgc ctgaaacgat tgaaaccaag gtcaaagaac 840
aagctcagct gctctatcgt agtctttgctc ttaaaggctc tgctcgcatc gacttttttg 900
tcacggatca aggagaacta tacttgaatg aaatcaatac tatgccgggc tttacgagtc 960
actcccgcta tcctgccatg atggcagcga tcggctttat ctatcaagaa ctactacaaa 1020
aactgctt                                     1030
```

<210> 1062
 <211> 1031
 <212> DNA
 <213> Enterococcus casseliflavus strain R754

```
<400> 1062
aaacatgaaa aaaatcgcca ttattttttg aggcaattca ccggaatata ccgtttcttt 60
agcttcagca actagcgcaa tcgaagcact ccaatcatct ccctatgact acgacctctc 120
tttgatcggg atcgccccag atgctatgga ttgggtactt tatacaggag aactggaaaa 180
catccgacaa gacacgtggg tggtggatac gaaacataaa cagaaaatac agccgctatt 240
cgaaggaaac ggccttttggc taagtgaaga gcagcaaacg ttggtacctg atgttttatt 300
tcccattatg catggcaaat acgggggaaga tggcagtatc caaggattgt ttgaattgat 360
gaagctgcct tatgtaggct gcgggggtggc aggttctgct ttatgtatga acaaatggct 420
```

```

gctgcatcaa gctgcagcag ccattggcgt acaaagtgtc cctacgattc tcttgacaaa 480
tcaagccaac cagcaagaac aaatcgaagc ttttatccag acccatggct tcccagtttt 540
ctttaagcct aatgaagcgg gctcctcaaa agggatcact aaagtcacct gcgttgaaga 600
aatcgcttct gccttaaaaag aagcctttac ttattgttcc gcagtgtctc tacaaaaaaa 660
tattgccggg gttgagatcg gttgcgggtat tttgggcaac gactctttga ctgtcgggtgc 720
ttgtgacgcc atttcattag tagacggcct tttcgatttt gaagaaaagt accagctgat 780
cagcgccaaa atcaccgctc ctgcgccatt gcctgaaacg attgaaacca aggtcaaaga 840
acaagctcag ctgctctatc gtagtcttgg tcttaaaggt cttgctcgca tcgacttttt 900
tgtcacggag cgaggagaac tatacttgaa tgaaatcaat actatgccgg gctttacgag 960
tcactccgcg tatcctgcca tgatggcagc ggtcgggtta tcctatcaag aactactaca 1020
aaaactgctt g                                     1031

```

<210> 1063
 <211> 1030
 <212> DNA
 <213> *Enterococcus casseliflavus* strain R775

```

<400> 1063
aacatgaaaa aaatcgccat tattttttgga ggcaattcac cggaatacac cgttttcttta 60
gcttcagcaa ctagcgcaat cgaagcactc caatcatctc cctatgacta cgacctctct 120
ttgatcggga tcgccccaga tgctatggat tgggtacttg atacaggaga actggaaaaa 180
atccgacaag acacgtgggt gttggatacg aaacataaac agaaaataca gccgctatatt 240
gaaggaaacg gcttttggct aagtgaagag cagcaaacgt tagtacctga tattttatatt 300
cccattatgc atggcaaata cggggaagat ggcagtatcc aaggattgtt tgaattgatg 360
aaactacctt atgtagggtg cgggggtggca ggttctgcct tatgtatgaa caaatggctg 420
ctgcatcaag ctgcagcagc cattggcgta caaagtgtc ctacgattct cttgacaaat 480
caagccaacc agcaagaaca aatcgaagct tttatccaga cccatggctt cccagttttc 540
tttaagccta atgaagcggg ctcttcaaaa gggatcacta aagtcacctg cggtgaagaa 600
atcgcttctg ccttaaaaaa agcctttact tattgttccg cagtgtcctt acaaaaaaat 660
attgccgggtg ttgagatcgg ttgcgggtatt ttgggcaacg actctttgac tgtcgggtgct 720
tgtgacgcca ttctattagt agacggcttt ttcgattttg aagaaaaagta ccagctgatc 780
agcgccaaaa tcaccgtccc tgcgccattg cctgaaacga ttgaaaccaa ggtcaaagaa 840
caagctcagc tgctctatcg tagtcttggg cttaaagggtc ttgctcgcat cgactttttt 900
gtcacgggatc aaggagaact atacttgaat gaaatcaata ctatgccggg ctttacgagt 960
cactcccggt atcctgccat gatggcagcg gtcgggttat cctatcaaga actactaca 1020
aaaactgctt g                                     1030

```

<210> 1064
 <211> 1032
 <212> DNA
 <213> *Enterococcus flavescens* ATCC 49996

```

<400> 1064
aaacatgaaa aaaatcgcca ttatttttgg aggcaattca ccggaatata ccgttttcttt 60
agcttcagca actagcgcaa tcgaagcact ccaatcatct ccctatgact acgacctctc 120
tttgatcggg atcgccccag atgctatgga ttgggtactg tatacaggag aactggaaaa 180
catccgacaa gacacgtggg tggtggatac gaaacagaaa cagaaaatac agccgctatt 240
cgaaggaaac ggcttttggg taagtgaaga gcagcaaacg ttggtacctg atgttttatt 300
tcccattatg catggcaaat acggggaaga tggcagtatc caaggattgt ttgaattgat 360
gaagctacct tatgtaggct gcgggggtggc aggttctgcc ttatgtatga acaaatgggt 420
gctgcatcaa gctgcagcag ccattggcgt acaaagtgtc cctacgattc tcttgacaaa 480
tcacgccaac cagcaagaac aaatcgaagc ttttatccag acccatggct ttccagtttt 540
ctttaagcct aatgaagcgg gttcctcaaa agggatcact aaagtcacct gcgttgaaga 600
aatcgcttct gccttaaaaag aagcctttac ttattgttcc gcagtgtctc tacaaaaaaa 660
tattgccggg gttgagatcg gttgcgggtat tttgggcaac gactctttga ctgtcgggtgc 720
ttgtgacgcc atttcattag tagacggcct tttcgatttt gaagaaaagt accagctgat 780
cagcgccaaa atcaccgctc ctgcgccatt gcctgaaacg attgaaacta aggtcaaaga 840
acaagctcag ctgctctatc gtagtcttgg acttaaaggt cttgctcgca tcgacttttt 900
tgtcacggat caaggagaac tatacttgaa tgaaatcaat actatgccgg gctttacgag 960
tcactccgcg tatcctgcca tgatggcagc ggtcgggtta tcctatcaag aactactaca 1020
aaaactactt gt                                     1032

```

<210> 1065

<211> 1034
<212> DNA
<213> Enterococcus flavescens strain R758

<400> 1065
aaaaacatga aaaaaatcgc cattatTTTT ggaggcaatt caccggaata caccgtttct 60
ttagcttcag caactagcgc aatcgaagca ctccaatcat ctccctatga ctacgacctc 120
tctttgatcg ggatcgcccc agatgctatg gattggtagt tgtatacagg agaactggaa 180
aacatccgac aagacacgtg gttgttggtg acgaaacata aacagaaaat acagccgcta 240
ttcgaaggaa acggcttttg gctaagttaa gagcagcaaa cgttggtacc tgatgtttta 300
tttcccatTA tgcatggcaa atacggggaa gatggcagta tccaaggatt gtttgaattg 360
atgaagctgc cttatgtagg ctgcgggggtg gcaagttctg ccttatgtat gaacaaatgg 420
ctgctgcacT aagctgcagc agccattggc gtacaaaagt ctcctacgat tctcttgaca 480
aatcaagcca accagcaaga acaaatcgaa gcttttatcc agacccatgg ctttccagtt 540
ttcttttaagc ctaatgaagc gggctcctca aaagggatca ctaaagtcac ctgctgtgaa 600
gaaatcgctt ctgccttaaa agaagccttt acttattggt ccgcagtgct cctacaaaaa 660
aatattgccc gtgttgagat cggttgcggg attttgggca acgactcttt gactgtcggg 720
gcttgtgacg ccatttcatt agtagacggc tttttcgatt ttgaagaaaa gtaccagctg 780
atcagcgcca aaatcacctg ccctgcgcca ttgcctgaaa cgattgaaac caagggtcaa 840
gaacaagctc agctgctcta tcgtagtctt ggtcttaaaag gtcttgctcg catcgacttt 900
tttgtcacgg atcaaggaga actatacttg aatgaaatca atactatgcc gggctttacg 960
agtcaactcc gctatcctgc catgatggca gcggtcggct tatectatca agaactacta 1020
caaaaactgc ttgt 1034

<210> 1066
<211> 1012
<212> DNA
<213> Enterococcus flavescens strain R760

<400> 1066
catgaaaaaa atcgccatta tttttggagg caattcacccg gaatacacccg tttcttttagc 60
ctcagcaact agcgcaatcg aagcaactcca atcatctccc tatgattacg acctctcttt 120
gatcgggatc gccccagatg ctatggattg gtacttgtat acaggagaac tggaaaacat 180
ccgacaagac acgtggttgt tggatacgaa acatacacag aaaatccagc cactttttga 240
aggaaacggc ttttggataa gtgaagcgca gcaaacgttg gtacctgatg ttttatttcc 300
cattatgcat ggtaaatacg gggaagatgg cagtatccaa ggattgtttg aattgatgaa 360
gtgccttat gtaggctgtg ggggtggcagc ctctgcctta tgtatgaaca aatggttatt 420
gcatcaagca gcagcagcga ttggcgtaca aagcgctcct acgattctct tgacaaatca 480
agccaaccag caaagacaaa tcgaagcctt tatccagacc catggctttc cagttttctt 540
taagcctaac gaagcgggct cctcaaaaagg gatcacaaaa gtaacttgtg ttgaagaaat 600
cgctcctgac ttgaaggaaag ccttcgctta ttgttccgca gtgctcttac aaaaaaatat 660
cgctggcggt gagattgggt gcggtatctt aggcaacgac tctttgactg tccggtgctt 720
tgacgctatt tcattagtag acggcttttt cgattttgaa gaaaagtacc agttgatcag 780
cgccaaaatc accgttcctg cgccattgcc tgaacagatt gaaaccaaag tcaaagaaca 840
agctcagctg ctctatcaca gtcttggtct taaaggactt gctcgcatcg acttttttgt 900
caggatcaa ggagaactat acttgaatga aatcaatact atgccgggct ttacgagtc 960
ctcccgtat cctgccatga tggcagcggt cggcttatcc tatcaagaat ta 1012

<210> 1067
<211> 721
<212> DNA
<213> Enterococcus faecium strain R481

<220>
<221> misc_feature
<222> (27)..(27)
<223> n represents any nucleotide

<400> 1067
cttacgcttt atcgattaga cacgggnagc ttgtccaatg ggragccgat ttgattttat 60
ggatgaacgc tctcatcatg cggcaaatgg aatatcatgc aatgaagcgc aaaatcgag 120
acgtttgcgc tccatcatgg aaaacagtgg gtttgaagca tatagcctcg aatgggtggca 180
ctatgtatta agagacgaac catacccaa tagctatttt gatttccccg ttaaataaac 240
ttttaaccgt tgcacggaca aactatataa gctaactctt tcggcaggaa acccgacgta 300

```
tgtaactggg tcttagggaa tttatatata gtagatagta ttgaagatgt aaggcagagc 360
gatattgcgg tcattatctg cgtgcgctgc ggcaagatag cctgataata agactgatcg 420
catagagggg tgggtatttca caccgcccac tgtcaacagg cagttcagcc tcgttaaatt 480
cagcatgggt atcacttatg aaaattcatc tacattgggtg ataatagtaa atccagtagg 540
gcgaaataat tgactgtaat ttacgggggca aaacgggcaca atctcaaacg agattgtgcc 600
gtttaagggg aagattctag aaatatattca tacttccaac tatatagtta aggaggagac 660
tgaaaatgaa gaagttgttt tttttattgt tattgttatt cttaatatat ttaggttatt 720
g
```

<210> 1068
<211> 668
<212> DNA
<213> *Enterococcus faecium* strain R492

```
<400> 1068
atttttaagg atgaacgctc ttcacatgc ggcaaattgga atatcatgca atgaagcgca 60
aatcgacaga cgtttgcgct ccatcatgga aaacagtggg tttgaagcat atagcctcga 120
atggtggcac tatgtattaa gagacgaacc ataccccaat agctattttg atttccccgt 180
taaataaaact tttaaccggt gcacggacaa actatataag ctaactcttt cggcaggaaa 240
cccgacgtat gtaactgggt cttaggggaat ttatatatag tagatagtat tgaagatgta 300
aggcagagcg atattgcggt cattatctgc gtgcgctgcg gcaagatagc ctgataataa 360
gactgatcgc atagaggggt ggtatttcac accgcccatt gtcaacaggc agttcagcct 420
cgttaaattc agcatgggta tcacttatga aaattcatct acattgggtga taatagtaaa 480
tccagtaggg cgaaataatt gactgtaatt tacgggggcaa aacggcacaa tctcaaacga 540
gattgtgccg tttaagggga agattctaga aatatttcat acttccaact atatagttaa 600
ggaggagact gaaaatgaag aagttgtttt ttttattggt attgttattc ttaatatact 660
taggttat
```

<210> 1069
<211> 760
<212> DNA
<213> *Enterococcus faecium* strain R581

<220>
<221> misc_feature
<222> (755)..(755)
<223> n represents any nucleotide

```
<400> 1069
cggcaagtgc cattgatctt acgctttatc gattagacac gggtragctt gtaccaatgg 60
gaagccgatt tgattttatg gatgaacgct ctcacatgc ggcaaattgga atatcatgca 120
atgaagcgca aatcgacaga cgtttgcgct ccatcatgga aaacagtggg tttgaagcat 180
atagcctcga atggtggcac tatgtattaa gagacgaacc ataccccaat agctattttg 240
atttccccgt taaataaaact tttaaccggt gcacggacaa actatataag ctaactcttt 300
cggcaggaaa ccgacgtat gtaactgggt cttaggggaat ttatatatag tagatagtat 360
tgaagatgta aggcagagcg atattgcggt cattatctgc gtgcgctgcg gcaagatagc 420
ctgataataa gactgatcgc atagaggggt ggtatttcac accgcccatt gtcaacaggc 480
agttcagcct cgttaaattc agcatgggta tcacttatga aaattcatct acattgggtga 540
taatagtaaa tccagtaggg cgaaataatt gactgtaatt tacgggggcaa aacggcacaa 600
tctcaaacga gattgtgccg tttaagggga agattctaga aatatttcat acttccaact 660
atatagttaa ggaggagact gaaaatgaag aagttgtttt ttttattggt attgttattc 720
ttaatatact taggttatga ctacgttaat gaaancctga 760
```

<210> 1070
<211> 801
<212> DNA
<213> *Enterococcus faecalis* strain R610

<220>
<221> misc_feature
<222> (127)..(127)
<223> n represents any nucleotide

```
<400> 1070
aaaaggaata cggggcctttc aaaaatccaa gccataaccc gcggggcaagt gccatttgat 60
tcttacgctt taatcgatta gacacgggta agcttgtagc aatggggaac cgatttgatt 120
ttaatgnatg aacgctcttc atcatgcggc aaatggaata tcatgcaatg aagcgcaaaa 180
tcgcagacgt ttgcgctcca tcatggaaaa cagtgggttt gaagcatata gcctcgaatg 240
gtggcactat gtattaagag acgaaccata cccaatagc tatttttgatt tccccgttaa 300
ataaactttt aaccgttgca cggacaaaact atataagcta actctttcgg caggaaaccc 360
gacgtatgta actggttctt aggggaattta tatatagtag atagtattga agatgtaagg 420
cagagcgata ttgcgggtcat tatctgcgtg cgctgcggca agatagcctg ataataagac 480
tgatcgcata gaggggtggg atttcacacc gcccatgtgc aacaggcagt tcagcctcgt 540
taaattcagc atgggtatca cttatgaaaa ttcactctaca ttggtgataa tagtaaattc 600
agtagggcga aataattgac tgtaatttac ggggcaaaac ggcacaatct caaacgagat 660
tgtgccgttt aagggggaaga ttctagaaat atttcatact tccaactata tagttaagga 720
ggagactgaa aatgaagaag ttgttttttt ttattgttat tgttattctt aatatactta 780
ggttatgact acgttaatga a
```

```
<210> 1071
<211> 711
<212> DNA
<213> Enterococcus gallinarum strain R684
```

```
<400> 1071
ttgtaccaat ggggagccga tttgatttta tggatgaacg ctctcatcat gcggcaaatg 60
gaatatcatg caatgaagcg caaaatcgca gacgtttgcg ctccatcatg gaaaacagtg 120
ggtttgaagc atatagcctc gaatgggtggc actatgtatt aagagacgaa ccatacccca 180
atagctatct tgatttcccc gttaaataaa cttttaaccg ttgcacggac aaactatata 240
agctaactct ttcggcagga aaccgcgagt atgtaactgg ttcttaggga atttatatat 300
agtagatagt attgaagatg taaggcagag cgatattgcg gtcattatct gcgtgcgctg 360
cggcaagata gcctgataat aagactgatc gcatagaggg gtggtatttc acaccgccc 420
ttgtcaacag gcagttcagc ctcgttaaat tcagcatggg tatcacttat gaaaattcat 480
ctacattggg gataatagta aatccagtag ggcgaaataa ttgactgtaa tttacggggc 540
aaaacggcac aatctcaaac gagattgtgc cgtttaaggg gaagattcta gaaatatttc 600
atacttccaa ctatatagtt aaggaggaga ctgaaaatga agaagtgtgt ttttttattg 660
ttattgttat tcttaatat cttagggttat gactacgtta atgaagcact g 711
```

```
<210> 1072
<211> 751
<212> DNA
<213> Enterococcus faecium strain R688
```

```
<220>
<221> misc_feature
<222> (37)..(37)
<223> n represents any nucleotide
```

```
<400> 1072
gccattgatc ttacgcttta tcgattagac acgggtnagc ttgtaccaat ggggagccga 60
tttgatttta tggatgaacg ctctcatcat gcggcaaatg gaatatcatg caatgaagcg 120
caaaatcgca gacgtttgcg ctccatcatg gaaaacagtg ggtttgaagc atatagcctc 180
gaatgggtggc actatgtatt aagagacgaa ccatacccca atagctatct tgatttcccc 240
gttaaataaa cttttaaccg ttgcacggac aaactatata agctaactct ttcggcagga 300
aaccgcgagt atgtaactgg ttcttaggga atttatatat agtagatagt attgaagatg 360
taaggcagag cgatattgcg gtcattatct gcgtgcgctg cggcaagata gcctgataat 420
aagactgatc gcatagaggg gtggtatttc acaccgccc 480
ctcgttaaat tcagcatggg tatcacttat gaaaattcat ctacattggg gataatagta 540
aatccagtag ggcgaaataa ttgactgtaa tttacggggc aaaacggcac aatctcaaac 600
gagattgtgc cgtttaaggg gaagattcta gaaatatttc atacttccaa ctatatagtt 660
aaggaggaga ctgaaaatga agaagtgttt ttttttattg ttattgttat tcttaatat 720
cttaggttat gactacgtta atgaagcact g 751
```

```
<210> 1073
<211> 685
<212> DNA
```

<213> *Enterococcus flavescens* strain R689

```
<400> 1073
at ttgatttt atggatgaac gctctcatca tgcggcaaat ggaatatcat gcaatgaagc 60
gcaaaatcgc agacgtttgc gctccatcat ggaaaacagt gggtttgaag catatagcct 120
cgaatggtgg cactatgtat taagagacga accatacccc aatagctatt ttgatttccc 180
cgttaaataa acttttaacc gttgcacgga caaactatat aagctaactc tttcggcagg 240
aaacccgacg tatgtaactg gttcttaggg aatttatata tagtagatag tattgaagat 300
gtaaggcaga gcgatattgc ggtcattatc tgcgtgcgct gcggcaagat agcctgataa 360
taagactgat cgcatagagg ggtggtatct cacaccgccc attgtcaaca ggcagttcag 420
cctcgttaaa ttcagcatgg gtatcactta tgaaaattca tctacattgg tgataatagt 480
aaatccagta gggcgaaaata attgactgta atttacgggg caaacgggca caatctcaaa 540
cgagattgtg ccgtttaagg ggaagattct agaaatattt catacttcca actatatagt 600
taaggaggag actgaaaatg aagaagttgt tttttttatt gttattgtta ttcttaatat 660
acttaggtta tgactacgtt aatga                                     685
```

<210> 1074

<211> 732

<212> DNA

<213> *Enterococcus faecium* strain R690

```
<400> 1074
atcgattaga cacgggtgag cttgtacca tggggagccg atttgatttt atggatgaac 60
gctctcatca tgcggcaaat ggaatatcat gcaatgaagc gcaaaatcgc agacgtttgc 120
gctccatcat ggaaaacagt gggtttgaag catatagcct cgaatggtgg cactatgtat 180
taagagacga accatacccc aatagctatt ttgatttccc cgttaaataa acttttaacc 240
gttgacgga caaactatat aagctaactc tttcggcagg aaacccgacg tatgtaactg 300
gttcttaggg aatttatata tagtagatag tattgaagat gtaaggcaga gcgatattgc 360
ggtcattatc tgcgtgcgct gcggcaagat agcctgataa taagactgat cgcatagagg 420
ggtggtatct cacaccgccc attgtcaaca ggcagttcag aaatccagta ttcagcatgg 480
gtatcactta tgaaaattca tctacattgg tgataatagt aaatccagta gggcgaaaata 540
attgactgta atttacgggg caaacgggca caatctcaaa cgagattgtg ccgtttaagg 600
ggaagattct agaaatattt catacttcca actatatagt taaggaggag actgaaaatg 660
aagaagttgt tttttttatt gttattgtta ttcttaatat acttaggtta tgactacgtt 720
aatgaagcac tg                                     732
```

<210> 1075

<211> 670

<212> DNA

<213> *Enterococcus gallinarum* strain R691

```
<400> 1075
tctcatcatg cggcaaatgg aatatcatgc aatgaagcgc aaaatcgcag acgtttgcgc 60
tccatcatgg aaaacagtgg gtttgaagca tatagcctcg aatggtggca ctatgtatta 120
agagacgaac catacccaa tagctatctt gatttccccg ttaaataaac ttttaaccgt 180
tgacaggaca aactatataa gctaactctt tcggcaggaa acccgacgta tgtaactggg 240
tcttagggaa tttatatata gtagatagta ttgaagatgt aaggcagagc gatattgcgg 300
tcattatctg cgtgcgctgc ggcaagatag cctgataata agactgatcg catagagggg 360
tggtatttca caccgcccat tgtcaacagg cagttcagcc tcgttaaatt cagcatgggt 420
atcacttatg aaaattcatc tacattgggtg ataatagtaa atccagtagg gcgaaaataa 480
tgactgtaat ttacggggca aaacggcaca atctcaaacg agattgtgcc gtttaagggg 540
aagattctag aaatatttca tacttccaac tatatagtta aggaggagac tgaaaatgaa 600
gaagttgttt tttttattgt tattgttatt cttaatatat ttaggttatg actacgttaa 660
tgaagcactg                                     670
```

<210> 1076

<211> 948

<212> DNA

<213> *Escherichia coli* strain DG131/3

```
<400> 1076
atgaaaataa taatttttag agtgctaact tttttctttg ttatcttttc tgtaaatgtg 60
gttgcggaagg aatttacctt agatttctcg acagcaaaga cgtatgtaga ttcgctgaat 120
```


gtcattcgct	ctgcaatagg	tactccatta	cagactat	catcaggagg	tacgtcttta	180
ctgatgattg	atagtggcac	aggggataat	ttgtttgcag	ttgatgtcag	agggatagat	240
ccagaggaag	ggcgggttaa	taatctacgg	cttattgttg	aacgaaataa	tttatatgtg	300
acaggatttg	ttaacaggac	aaataatgtt	ttttatcgct	ttgctgattt	ttcacatgtt	360
acctttcctg	gtacaactgc	ggttacattg	tctggtgaca	gtagctatac	cacgttacag	420
cgtgttgccg	ggatcagtcg	tacggggatg	cagataaatc	gccattcggt	gactacttct	480
tatctggatt	taatgtcgca	tagcgggaacc	tcactgacgc	agtctgtggc	aagagcgatg	540
ttacggtttg	ttactgtgac	agctgaagct	ttacgttttc	ggcaaattca	gaggggattt	600
cgtacaacac	ttgatgatct	cagtgggcgt	tcttatgtaa	tgactgctga	agatgttgat	660
cttacgttga	actgggggaag	ggtgagtagt	gtcctgcctg	actatcatgg	acaagactct	720
gttcgtgttg	gaagaatttc	ttttggaagt	gttaatgcaa	ttctgggtag	cgtggcatta	780
atactgaatt	gtcatcatca	tgcacgcgca	gttgccagaa	ttgtaccta	tgagtttctt	840
tctatgtgcc	cggtagatgg	aagagtgcgt	gggattacgc	acaataaaat	attgtgggac	900
tcatccactc	tgggggcaat	tttgatacgc	agggctatta	gcagttga		948

<210> 1077
<211> 1259
<212> DNA
<213> Escherichia coli strain 94C

cacctgtata	tgaagtgtat	attatttaaa	tgggtactgt	gcctgttact	gggtttttct	60
tcggtatcct	attcccggga	gtttacgata	gacttttcga	cccaacaaag	ttatgtctct	120
tcgttaaata	gtatacggac	agagatatcg	acccctcttg	aacatatatc	tcaggggacc	180
acatcgggtg	ctgttattaa	ccacacccca	ccgggcagtt	attttgctgt	ggatatacga	240
gggcttgatg	tctatcaggc	gcgttttgac	catcttcggc	tgattattga	gcaaaataat	300
ttatatgtgg	ccgggttcgt	taatacggca	acaaataact	tctaccgttt	ttcagatttt	360
acacatatat	cagtgcgccga	tgtgacaacg	gtttccatga	caacggacag	cagttatacc	420
actctgcaac	gtgtcgcagc	gctggaacgt	tccggaatgc	aatcagtcg	tcactcactg	480
gtttcatcat	atctggcggt	aatggagttc	agtggtaata	caatgaccag	agatgcatcc	540
agagcagttc	tgcgttttgt	cactgtcaca	gcagaagcct	tacgcttcag	gcagatacag	600
agagaatttc	gtcaggcact	gtctgaaact	gctcctgtgt	ataccatgac	gccgggagac	660
gtggacctca	ctctgaactg	ggggcgaatc	agcaatgtgc	ttccggagta	tcggggagag	720
gatggtgtca	gagtggggag	aatatccttt	aataatatat	cagcgatact	gggtactgtg	780
gccgttatac	tgaattgcc	tcacagggg	gcgcgttctg	ttcgcgccgt	gaatgaagag	840
agtcaaccag	aatgtcagat	aactggcgac	aggcccggtta	taaaaataaa	caatacatta	900
tgggaaagta	atacagctgc	agcgtttctg	aacagaaagt	cacagttttt	atatacaacg	960
ggtaataaaa	ggagttaagt	atgaagaaga	tgtttatggc	ggttttat	gcattagttt	1020
ctgttaaatgc	aatggcgggc	gattgtgcta	aaggtaaaat	tgagttttcc	aagtataatg	1080
aggatgacac	atttacagt	aaggttgacg	ggaaagaata	ctggaccagt	cgctggaatc	1140
tgcaaccggt	actgcaaagt	gctcagctga	caggaatgac	tgtcacaatc	aaatccagta	1200
cctgtgaatc	aggctccgga	tttgctgaag	tcagttttaa	taatgactga	ggcataacc	1259

<210> 1078
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1078
agttctgcgt tttgtcactg tc 22

<210> 1079
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1079
cggaagcaca ttgctgatt 19

<210> 1080
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1080 25
tatagctact gtcaccagac aatgt

<210> 1081
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1081 20
atgtcagagg gatagatcca

<210> 1082
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1082 23
ttgarcraaa taatttatat gtg

<210> 1083
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1083 20
tgatgatgrc aattcagtat

<210> 1084
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1084

ccacgccgct ttgetgattt ttcacatgtt accgcgtgg 39

<210> 1085
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1085 34
ccacgccact gtctgaaact gtcctgtgc gtgg

<210> 1086
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1086 20
ctactcccgc cttttgggtt

<210> 1087
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1087 20
ctcacagccc gaaacagcct

<210> 1088
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1088 . 20
tgccgtttcc tgtatccgtc

<210> 1089
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1089 20
atccacacgg gctagacctc

<210> 1090
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1090
aatagcgcgg acgaattgga c 21

<210> 1091
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1091
aacgcggcac tgtttcccaa 20

<210> 1092
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1092
tcggcaagac aatatgacag c 21

<210> 1093
<211> 381
<212> DNA
<213> Staphylococcus saprophyticus strain CSsa-165

<400> 1093
taacggggcgt ctcgatagaa aaacacgtga aaatcccaat gattataaac aatcaatata 60
cgatttttgct gaagctgtaa caaaagggtat taaggaacaa acaaataaaa attaataggc 120
aacttaacca gaatcgtaa aactatatga cgattctggt tttttaaatt caaaaagtgt 180
tctaaaaaat ttacctgctt ttttaaagta taggtataaa atacaattga ttaaaaatagt 240
aaaggaaatg aatcatgaaa caattaacta agcctttata cttttaccta ttacttttta 300
ttacaacaac actgattggc gcgttactat tatatttgcc aatcacaggt aaacatccta 360
ttgattttgt ggacgcccg t 381

<210> 1094
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1094
ggtaaaacag gtactttctaa cta 23

<210> 1095
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1095
cgatagaagc agcaggacaa 20

<210> 1096
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1096
ctgatggatg cggaagatac 20

<210> 1097
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1097
tcytcaaaaag ggatcacwaa agtmac 26

<210> 1098
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1098
tcttcaaaaat cgaaaaagcc gtc 23

<210> 1099
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1099
tcaaaaggga tcacwaaagt mac 23

<210> 1100
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1100
gtaaakcccg gcatrgtrtt gatttc 26

<210> 1101
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1101
gacggytttt tygattttga aga 23

<210> 1102
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1102
aaaaartcga tkcgagcmag acc 23

<210> 1103
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1103
atcccgctat gaaaacgatc 20

<210> 1104
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1104
ggatcaacac agtagaaccg 20

<210> 1105

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1105
ctcctacgat tctcttgaya aatca 25

<210> 1106
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1106
caaccgatct caacaccggc aat 23

<210> 1107
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1107
ctcatttgac ttctctcttt gct 23

<210> 1108
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1108
gtaagaatcg gaaaagcgga agg 23

<210> 1109
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1109
acatcgtgat cgctaaaagg agc 23

<210> 1110
<211> 23

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1110
acgagaaaga caacaggaag acc 23

<210> 1111
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1111
ctttttccgg ctcgwyttcc tgatg 25

<210> 1112
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1112
ggctgygata ttcaaagctc 20

<210> 1113
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1113
accgacctca cagcccgaaa 20

<210> 1114
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1114
tcwgagcctt tttccggctc g 21

<210> 1115
<211> 26
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1115

tttcgggctg tgaggtcggb tghgcg

26

<210> 1116

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1116

tttcgggctg tgaggtcggb tghgcg

27

<210> 1117

<211> 801

<212> DNA

<213> Enterococcus faecium strain U94526

<400> 1117

aaattcgatc	cgcactacat	cggaattaca	aaaaacggtg	tatggaagct	atgcaagaag	60
ccatgtacgg	aatgggaagc	cgacagtctc	cccgccatac	tctcccggga	taggaaaacg	120
catgggctgc	ttgtcatgaa	agaaagcgaa	tacgaaacac	ggcgtattga	tgtggctttc	180
cgggttttgc	atggcaaata	cggggaggat	ggtgcgatac	aggggctggt	tgtattgtct	240
ggtatcccc	atgtgggctg	tgatattcaa	agctccgcag	cttgcattga	caaatacactg	300
gcctacattc	ttacaaaaaa	tgcgggcatc	gccgttcccc	aatttcaaata	gattgataaaa	360
ggtgacaagc	cggaggcggg	tgcgcttacc	taccctgtct	ttgtgaagcc	ggcacggtca	420
ggttcgtcct	ttggcgtaac	caaagtatac	ggtacggaag	aacttaacgc	tgcatagaa	480
gcggcaggac	aatatgatgg	aaaaatctta	attgagcaag	cgatttcggg	ctgtgaggtc	540
gggtgtgcgg	tcatggggaa	cgaggatgat	ttgattgtcg	gcgaagtgga	tcaaataccgg	600
ctgagccacg	gtatcttccg	catccatcag	gaaaacgagc	cggaaaaagg	ctcagaaaat	660
gcgatgatta	cagttcccgc	agacattccg	gtcgaggaac	gaaatcgggt	gcaggaaaacg	720
gcaaagaaag	tatatcgggt	gcttggatgc	agagggcttg	cccgtgttga	tctttttttg	780
caggaggatg	gcggcatcgt	t				801

<210> 1118

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1118

ttttcwgagc ctttttccgg ctcg

24

<210> 1119

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1119
tttcgggctg tgaggtcggb tghgc 25

<210> 1120
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1120
tttcgggctg tgaggtcggb tghg 24

<210> 1121
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1121
tgtttgwatt gtcygyatc cc 22

<210> 1122
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1122
tggtgcattg ctacgtgg 18

<210> 1123
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1123
tttcgggctg tgaggtcggb tg 22

<210> 1124
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1124

gatttgrtcc acytgccra ca

22

<210> 1125
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1125
actcacaact gggatggatg

20

<210> 1126
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1126
ttatggttgt gctggttgag g

21

<210> 1127
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1127
kcaaaygcca tttcaagtaa

20

<210> 1128
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1128
gacgacytta tkgatataca

20

<210> 1129
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1129
atgatgachg amatgatgaa aac

23

<210> 1130
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1130
gactatccaa gcatgcatta tg 22

<210> 1131
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1131
catctggagc tacrtarcca gt 22

<210> 1132
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1132
agtgaaaara tggctgctgc 20

<210> 1133
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1133
catcaagaac actggctayg tag 23

<210> 1134
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1134
ctagatagag ctaaaacctt cct 23

<210> 1135
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1135
cattatgcaa acgccatttc aag 23

<210> 1136
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1136
acttgtccac gttsgatrtc t 21

<210> 1137
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1137
aattaatggc tgcwgttgay gaa 23

<210> 1138
<211> 1032
<212> DNA
<213> Enterococcus gallinarum

<400> 1138
atgaaaaaaa ttgccgtttt atttggaggg aattctccag aatactcagt gtcactaacc 60
tcagcagcaa gtgtgatcca agctattgac ccgctgaaat atgaagtaat gaccattggc 120
atcgcaccaa caatggattg gtattggtat caaggaaacc tcgcgaatgt tcgcaatgat 180
acttggctag aagatcacaa aaactgtcac cagctgactt tttctagcca aggatttata 240
ttaggagaaa aacgaatcgt ccctgatgtc ctctttccag tcttgcattg gaagtatggc 300
gaggatggct gtatccaagg actgcttgaa ctaatgaacc tgcttatgtg tgggtgcat 360
gtcgtgcct ccgcattatg tatgaacaaa tggctcttgc atcaacttgc tgataccatg 420
ggaatcgcta gtgtcccac tttgctttta tcccgcctatg aaaacgatcc tgccacaatc 480
gatcgtttta ttcaagacca tggattcccg atctttatca agccgaatga agccggttct 540
tcaaaaaggga tcacaaaagt aactgacaaa acagcgctcc aatctgcatt aacgactgct 600
tttgccttacg gttctactgt gttgatccaa aaggcgatag cgggtattga aattggctgc 660
ggcatcttag gaaatgagca attgacgatt ggtgcttgat atgcgatttc tcttgtcgac 720
ggtttttttg attttgaaga gaaataccaa ttaatcagcg ccacgatcac tgtcccagca 780
ccattgcctc tcgcgcttga atcacagatc aaggagcagg cacagctgct ttatcgaaac 840
ttgggattga cgggtctggc tcgaatcgat tttttcgtca ccaatcaagg agcgatttat 900
ttaaaccgaaa tcaaacaccat gccgggattt actgggcact cccgctaccc agctatgatg 960
gcggaagtcg gggtatccta cgaaatatta gtagagcaat tgattgcact ggcagaggag 1020
gacaaacgat ga 1032

<210> 1139

<211> 1768
 <212> DNA
 <213> *Enterococcus faecium* strain BM4147

<400> 1139
 gatatacggtta cgcttcatgt gccgctcaat acggatacgc actatattat cagccacgaa 60
 caaatacaga gaatgaagca aggagcattt cttatcaata ctgggcgcgg tccacttgta 120
 gatacctatg agttggttaa agcattagaa aacgggaaac tgggcggtgc cgcattggat 180
 gtattggaag gagaggaaga gtttttctac tctgattgca cccaaaaacc aattgataat 240
 caatttttac ttaaaacttca aagaatgcct aacgtgataa tcacaccgca tacggcctat 300
 tataccgagc aagcgttgcg tgataccggt gaaaaaacca ttaaaaaactg tttggatttt 360
 gaaaggagac aggagcatga atagaataaa agttgcaata ctggttgggg gttgctcaga 420
 ggagcatgac gtatcggtaa aatctgcaat agagatagcc gctaacatta ataaagaaaa 480
 atacgagccg ttatacattg gaattacgaa atctggtgta tggaaaatgt gcgaaaaacc 540
 ttgcgcggaa tgggaaaacg acaattgcta ttcagctgta ctctcgccgg ataaaaaat 600
 gcacggatta cttgttaaaa agaaccatga atatgaaatc aaccatgttg atgtagcatt 660
 ttcagctttg catggcaagt cagggtgaaga tggatccata caaggctctgt ttgaattgtc 720
 cggtatccct tttgtaggct gcgatatcca aagctcagca atttgtatgg acaaatcggt 780
 gacatacatc gttgcgaaaa atgctgggat agctactccc gccttttggg ttattaataa 840
 agatgatagg ccggtggcag ctacgtttac ctatcctgtt tttgttaagc cggcgcgttc 900
 aggctcatcc ttcggtgtga aaaaagtcaa tagcgcggac gaattggact acgcaattga 960
 atcggcaaga caatatgaca gcaaaatctt aattgagcag gctgtttcgg gctgtgaggt 1020
 cgggtgtgcg gtattgggaa acagtgcgcg gttagtgtt ggcgaggtgg accaaatcag 1080
 gctgcagtac ggaatctttc gtattcatca ggaagtcgag ccggaaaaag gctctgaaaa 1140
 cgcagttata accgttcccc cagacctttc agcagaggag cgaggacgga tacaggaaac 1200
 ggcaaaaaaa atatataaag cgctcggctg tagaggtcta gcccgtgtgg atatgttttt 1260
 acaagataac ggcgcgattg tactgaacga agtcaatact ctgcccgggt tccagtcata 1320
 cagtgcgttat ccccgatga tggccgctgc aggtattgca cttcccgaac tgattgaccg 1380
 cttgatcgta ttagcggtta aggggtgata agcatggaaa taggatttac ttttttagat 1440
 gaaatagtac acggtgttcg ttgggacgct aaatatgcca cttgggataa tttcaccgga 1500
 aaaccggttg acggttatga agtaaatcgc attgtaggga catacagatt ggctgaatcg 1560
 cttttgaagg caaaagaact ggctgctacc caagggtacg gattgcttct atgggacggt 1620
 taccgtccta agcgtgctgt aaactgtttt atgcaatggg ctgcacagcc ggaaaaatac 1680
 ctgacaaaag aaagttatta tcccaatatt gaccgaactg agatgatttc aaaaggatac 1740
 gtggcttcaa aatcaagcca tagccgcg 1768

<210> 1140
 <211> 1086
 <212> DNA
 <213> *Enterococcus casseliflavus*

<400> 1140
 gtaagaatcg gaaaagcggg aggaagaaaa acatgaaaaa aatcgccatt atttttggag 60
 gcaattcacc ggaatacacc gtttcttttag cttcagcaac tagcgcaatc gaagcactcc 120
 aatcatctcc ctatgactac gacctctctt tgatcgggat cgccccagat gctatggatt 180
 ggtacttgta tacaggagaa ctggaaaaaca tccgacaaga cagctgggtg ttggatacga 240
 aacataaaca gaaaatacag ccgctatttc aaggaaacgg ctttttggtc agtgaagagc 300
 agcaaacggt ggtacctgat gttttatttc ccattatgca tggcaaatac ggggaagatg 360
 gcagtatcca aggattgttt gaattgatga agctgcctta tgtaggctgc ggggtggcag 420
 gttctgcctt atgtatgaac aaatggctgc tgcatcaagc tgcagcagcc attggcgtac 480
 aaagtgcctc tacgattctc ttgacaaatc aagccaacca gcaagaacaa atcgaagcct 540
 ttatccagac ccattggcttc ccagttttct ttaagcctaa tgaagcgggc tcctcaaaaag 600
 ggatcactaa agtcacctgc gttgaagaaa tcgcttctgc cttaaaagaa gcctttactt 660
 attgttccgc agtgctccta caaaaaata ttgccggtgt tgagatcggt tgcggtattt 720
 tgggcaacga ctctttgact gtccgtgctt gtgacgccat ttcattagta gacggctttt 780
 tcgatttttg agaaaagtac cagctgatca gcgcaaaaat caccgtccct gcgccattgc 840
 ctgaaacgat tgaaaccaag gtcaaagaac aagctcagct gctctatcgt agtcttggtc 900
 ttaaaggctc tgctcgcatc gacttttttg tcacggagcg aggagaacta tacttgatg 960
 aaatcaatac tatgcggggc ttacagagtc actccgcta tcctgccatg atggcagcgg 1020
 tcggcttatc ctatcaagaa ctactacaaa aactgcttgt cttagcaaaag gaggaagtca 1080
 aatgag 1086

<210> 1141
 <211> 3946

<212> DNA
<213> Enterococcus faecium strain BM4147

<400> 1141
atgaataaca tcggcattac tgtttatgga tgtgagcagg atgaggcaga tgcattccat 60
gctcttttcgc ctgccttttg cgttatggca acgataatta acgccaacgt gtcggaatcc 120
aacgccaaat ccgcgccttt caatcaatgt atcagtgtgg gacataaatc agagatttcc 180
gcctctatctc ttcttgcgct gaagagagcc ggtgtgaaat atatttctac ccgaagcatc 240
ggctgcaatc atatatagac aactgctgct aagagaatgg gcatcactgt cgacaatgtg 300
gcgtactcgc cggatagcgt tgccgattat actatgatgc taattcttat ggcagtacgc 360
aacgtaaaat cgattgtgcg ctctgtggaa aaacatgatt tcaggttgga cagcgaccgt 420
ggcaagggtac tcagcgacat gacagttggt gtggtgggaa cgggccagat aggcaaagcg 480
gttattgagc ggctgcgagg atttgatggt aaagtgttgg cttatagtcg cagccgaagt 540
atagaggtag actatgtacc gtttgatgag ttgctgcaaa atagcgatat cgttacgctt 600
catgtgccgc tcaatacggg tacgcactat attatcagcc acgaacaaat acagagaatg 660
aagcaaggag catttcttat caatactggg cgcggtccac ttgtagatac ctatgagttg 720
gttaaagcat tagaaaacgg gaaactgggc ggtgccgcac tggatgtatt ggaaggagag 780
gaagagtttt tctactctga ttgcaccaa aaaccaattg ataatacaat tttacttaaa 840
cttcaaagaa tgcctaacgt gataatcaca ccgcatacgg cctattatac cgagcaagcg 900
ttgcgtgata ccgttgaaaa aaccattaaa aactgtttgg attttgaaag gagacaggag 960
catgaataga ataaaagttg caatactggt tgggggttgc tcagaggagc atgacgtatc 1020
ggtaaaatct gcaatagaga tagccgctaa cattaataaa gaaaaatac agccggtata 1080
catttggaatt acgaaatctg gtgtatggaa aatgtgcgaa aaaccttgcg cggaatggga 1140
aaacgacaat tgctattcag ctgtactctc gccggataaa aaaatgcacg gattacttgt 1200
taaaaagaac catgaatatg aaatcaacca tgttgatgta gcattttcag ctttgcattg 1260
caagtcaggt gaagatggat ccatacaagg tctgtttgaa ttgtccggtg tcccttttgt 1320
aggctgcgat attcaaagct cagcaatttg tatggacaaa tcgttgacat acatcgttgc 1380
gaaaaatgct gggatagcta ctcccgcctt ttgggttatt aataaagatg ataggccggt 1440
ggcagctacg tttaacctatc ctgtttttgt taagccggcg cgttcaggct catccttcgg 1500
tgtgaaaaaa gtcaatagcg cggacgaatt ggactacgca attgaatcgg caagacaata 1560
tgacagcaaa atcttaattg agcaggctgt ttcgggctgt gaggtcgggt gtgcggtatt 1620
gggaaacagt gccgcgttag catcagggaag tcgagccgga aaaaggctct gaaaacgcag 1680
ctttcgattt catcagggaag aggagcgagg acggatacag gaaacggcaa aaaaaatata 1740
tcccgcagac ctttcagcag ggctgtagag gtctagcccc ggtttcacg cttttacaag 1800
taaagcgctc aacgaagtca atactctgcc cgaactgatt gaccgcttga tttttacag 1860
cattgtactg gctgcaggta ttgcacttcc cgaactgatt gaccgcttga tttttacag 1920
tatgatggcc tgataagcat ggaaatagga tttacttttt tagatgaaat gttatccccg 1980
gttaaagggg acgctaaata tgccacttgg gataatttca ccggaaaacc ggttgacggt 2040
gttcggttgg acgctaaata tgccacttgg gataatttca ccggaaaacc ggttgacggt 2100
tatgaagtaa atcgcatgtg agggacatac gagttggctg aatcgctttt gaaggcaaaa 2160
gaactggctg ctaccaaggg gtctatggg cttctatggg acggttaccg tcctaagcgt 2220
gctgtaaaat gttttatgca atgggctgca cagccggaaa ataacctgac aaaggaaagt 2280
tattatccca atattgaccg aactgagatg atttcaaaag gatacgtggc ttcaaaatca 2340
agccatagcc gcggcagtg cgttagcccc ggtttcacg gattagacac gggtagctt 2400
gtaccaatgg ggagccgatt tgattttatg cgtgaacgct ctcacatgac ggcaaatgga 2460
atatcatgca atgaagcgca aaatcgaga cgtttgcgct ccatcatgga aacagtgagg 2520
tttgaagcat atagcctcga atgggtggcac tatgtattaa gagacgaacc ataccccaat 2580
agctattttg atttccccgt taaataaaact ttttaaccgt gtaactgggt cttagggaat 2640
ctaactcttt cggcaggaaa cccgacgtat gtaactgggt cttagggaat ttatatatag 2700
tagatagtat tgaagatgta aggcagagcg atattgagg ggtattttcac accgcccatt 2760
gcaagatagc ctgataataa gactgatcgc atagaggggt ggtattttcac accgcccatt 2820
gtcaacaggc agttcagcct cgttaaattc agcatgggta tcaacttatga aaattcatct 2880
acattggtga taatagtaaa tccagtaggg cgaaataatt gactgtaatt tacggggcaa 2940
aacggcacia tctcaaacga gattgtgccg ttttaaggga agatttctaga aatatttcat 3000
acttccaact atatagttaa ggaggagact gaaaatgaag aagttgtttt ttttattggt 3060
attgttattc ttaatatact taggttatga ctacgttaat gaagcactgt tttctcagga 3120
aaaagtcgaa tttcaaaatt atgatcaaaa tcccaaagaa catttagaaa atagtgggac 3180
ttctgaaaaa acccaagaga aaacaattac agaagaacag gtttatcaag gaaatctgct 3240
attaatcaat agtaaatatc ctgttcgcca agaaaagtgt agatgtaata tttatatgtc 3300
atctaaacat gacgaattaa taaatggata cgggttgctt gatagtaata ttttatgtgc 3360
aaaagaaata gcacaaaaat tttcagagat ggtcaatgat gctgtaaagg gtggcggttag 3420
tcattttatt attaatagtg gctatcgaga ctttgatgag caaagtgtgc tttaccaaga 3480
aatgggggct gagtatgcct taccagcagg ttatagtgag cataattcag gtttatcact 3540
agatgtagga tcaagcttga cgaaaatgga acgagcccct gaaggaaagt ggatagaaga 3600
aaatgccttg aaatacgggt tcatttttac ttatccagag gacaaaacag agttaacagg 3660
aattcaatat gaaccatggc atatttcgcta tgttggttta ccacatagtg cgattatgaa 3720

agaaaagaat ttcgtttctcg aggaatatat ggattaccta aaagaagaaa aaaccatttc 3780
tgttagtgtg aatgggggaaa aatatgagat cttttattat cctgttacta aaaataccac 3840
cattcatgtg ccgactaatc ttcgttatga gatatcagga aacaatatag acggtgtaat 3900
tgtgacagtg tttcccggat caacacatac taattcaagg aggtaa 3946

<210> 1142
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1142 25
gacacctaa atgattctca ggtgg

<210> 1143
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1143 25
caattagctt agcaataggt gttgg

<210> 1144
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1144 20
tgtyttcaa gggtcagctc

<210> 1145
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1145 20
aacatattkg gttgataggt

<210> 1146
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1146
gggattacct atgccaatat gat 23

<210> 1147
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1147
agctgtgtta gvcgaacat cttg 24

<210> 1148
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1148
gactttgttt ggcgtgatat 20

<210> 1149
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1149
tccyacwatt tcttttttgwg 20

<210> 1150
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1150
tgataatcac accgcatacg 20

<210> 1151
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1151

tgctgtcata ttgtcttgcc 20

<210> 1152
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1152 20
ataaagatga taggccggtg

<210> 1153
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1153 20
ctcgtatgtc cctacaatgc

<210> 1154
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1154 20
gtttgaagca tatagcctcg

<210> 1155
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1155 21
cagtgttca ttaacgtagt c

<210> 1156
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1156 23
gttgaaatgc atcacgaaca att

<210> 1157
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1157
aagaacgttt cagttaagga aat

23

<210> 1158
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1158
aagaggtaat gtctgtggt

19

<210> 1159
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1159
tgaaggtttg ccagggtga

18

<210> 1160
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1160
cgtttctggt aaagaaatta gaag

24

<210> 1161
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1161
tccaggtgat aacgttgg

18

<210> 1162
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1162
caagtccgtg gaaatgca 18

<210> 1163
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1163
gttggtttca acgttaagaa c 21

<210> 1164
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1164
ggtttcaacg tcaagaac 18

<210> 1165
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1165
ggtttcaacg tgaagaac 18

<210> 1166
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1166
acgttaagaa tgtttctgtc aa 22

<210> 1167

<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1167
gttggtttca acgt

14

<210> 1168
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1168
gaacaattgg ttgaaggtgt

20

<210> 1169
<211> 2160
<212> DNA
<213> Streptococcus pneumoniae strain SP-665

<400> 1169
atgaacaaac caacgattct ggcgctaate aagtatctga gcattagctt cttagcttg 60
gttatcgag ccattgtctt aggcggagga gtttttttct actacgttag caaggctcct 120
agcctatccg agagtaaact agttgcaaca acttctagta aaatctacga caataaaaaat 180
caactcattg ctgacttggtt ttctgaacgc cgcgtcaatg cccaagctaa tgatattccc 240
acagatttgg ttaaggcaat cgtttctatc gaagaccatc gcttcttcga ccacaggggg 300
attgattcca tccgtatcct gggagctttc ttgcgcaatc tgcaaagtaa ttccctccaa 360
ggtggatcaa ctctcaccca acagttgatt aagttgactt acttttcaac ctgcacttcc 420
gaccagacta tttctcgtaa ggctcaggaa gcttggttag cgattcagtt agaacaaaaa 480
gcaaccaaac aggaaatctt gacctactat ataaataagg tctacatgtc taatggcaac 540
tatggaatgc agacagcagc tcaaaactac tatggtaaag acctcaataa ttttaagttta 600
cctcagttag ccttgctggc tggaatgcct caggcaccaa accaatatga cccctattca 660
catccagaag cagcccaaga ccgcccgaac ttggtcttat ctgaaatgaa aaatcaaggt 720
tacatctctg ctgaacagta tgagaaagca gtcaatacac caattactga tggactacaa 780
agtctcaaat cagcaagtaa ttaccctgct tacatggata attacctcaa ggagggtcatc 840
aatcaagtag aacaagaaac tggtataaac cttctaacta ctgggatgga tgtttacaca 900
aatgtagacc aagaagctca aaaacatctg tgggatatct acaactccga tcaatacgtc 960
tcttaccctg acgatgattt gcaagtcgca tctacggctg tagatgtttc aaatggtaaa 1020
gtcatcgccc aacttgagc tcgtcaccaa gcaagtaacg tttcatttgg taccaaccaa 1080
gctgtggaaa ccaatcgtga ctgggggttct gctatgaaac caatcaccca ttatgcacct 1140
gccatagaat acggtgttta tgattccact gcaactatgg ttaatgatat tccttataac 1200
tatccgggaa caagcacacc tgtctacaac tgggatatag catatttcgg taatattact 1260
ctgcaatatg ctcttcaaca atcacgaaat gtcacagccg ttgagacttt gaataaggctc 1320
ggtctagata gagctaaaaa cttccttaat ggtcttggtt tcgactatcc aagcatgcat 1380
tatgcaaacg ccatttcaag taatacaaca gaatctaata aacaatacgg agcaagtagt 1440
gaaaaaatgg ctgctgctta tgctgccttt gcaaagtgtg gcacttacta taaaccaatg 1500
tatatccata aagtcgtctt cagtgatgga agtaaaaaag agttctctaa tgtcgggaact 1560
cgtgccatga aggaacgac agcctatatg atgaccgaca tgatgaaaac agtcttgact 1620
tatggaactg ggcgtggagc ctatcttctc cagcttctc aagctggtaa aacaggaacc 1680
tctaactata cagatgagga agttgaaaac cacatcaaga acactggcta tgtagctcca 1740
gatgaaatgt ttgttggtta tactcgtaag tattctatgg ctgtatggac aggttattcg 1800
aatcgtttaa ctctatcgt tggagatggt ttcttagttg cagctaaagt ttatcgctca 1860
atgataacgt atctatcaga agatactcat ccagaagact ggacgatgcc agacggactt 1920
ttcagaaacg ggggaatttgt attcaaaaat ggagctcgcc caatatggac tgaaccctct 1980
actcaacaat cctcaacagc tgaaagtcca agctcatcat cagatagttc aacttcacag 2040
tctagctcaa ccactccaag cacaaataat agtacgacta ccaatcctaa caataatacg 2100

caacaatcaa atacaacccc tgatcaacaa aatcagaatc ctcaaccagc acaaccataa 2160

<210> 1170
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1170
acgaattgga ctacgcaatt 20

<210> 1171
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1171
acgaggatga tttgattgtc 20

<210> 1172
<211> 1560
<212> DNA
<213> Streptococcus pneumoniae strain 64147

<400> 1172
gacccctctaa atgattctca ggtggctggt attgcctcta tttcaaagga gatgcctggc 60
attagtatttt ctacttcttg ggatagaaag gtttttgaaa cttccctttc ttctatagtt 120
gggagtgtat ccagtgaana agctgggtct ccagcgggaag aagcagaagc ctatcttaaa 180
aaaggctatt ctctaaatga ccgtgtagga acctcctatt tggaaaagca atatgaagag 240
accttacaag gaaaacgctc ggtaaaagaa atccatctgg acaaatatgg caacatggaa 300
agcgtggaga caattgagga aggtagtaag ggaaacaata tcaagctgac cattgatttg 360
gccttccaag atagcgtgga tgctttgctg aaaagttatt tcaattcaga gttgggaaat 420
ggtggagcca agtattctga aggtgtctat gcagtcgccc ttaacccaaa aacagggtgct 480
gttttgtcta tgtcaggaat taaacatgac ttgaaaacag gagagttgac gccggattcc 540
ttgggaacgg taaccaatgt ctttgtccca gggtcggttg tcaaagcagc gaccatcagc 600
tctggttggg aaaatggagt cttgtcagga aatcagacct tgacagacca gtccattgtc 660
tttcaagggt cagctccaat taattcttgg tatcctgcct tttctagacc aatgccgatt 720
acggcgggtc aggtctctaga gtattcatcc aatgcttata tgggtccaaac agccctaggt 780
cttatggggc agacctatca acccaatatg tttgtcggca ccagcaatct agagtctgct 840
atgggggaaat tgcgttcaac ctttgggtgaa tatggtttgg gttctgagac cggaattgac 900
ctaccagatg aatctactgg atttgttccc aaagagtata gctttgctaa tttcattacc 960
aatgcctttg ggcagtttga taactatacg ccgatgcagt tggctcagta tgtagcaact 1020
attgcaaata atggtgttcg tgtggctcct cgtattgttg aaggcattta tggtaataat 1080
gataagggag gactgggtga cttgattcag caactgcaac cgacagagat gaataagggtc 1140
aatatatccg actccgatat gagcatcttg caccaagggt tttatcaggt tgcccatgggt 1200
actagtgaat tgacaactgg acgtgccttt tcaaatggcg ccttggtatc cattagcgga 1260
aaaacaggta cagccgaaag ctatgtggca gatggtcagc aagcaaccaa taccaatgag 1320
gtggcctatg ccccatctga taatccccaa atcgtgttag ctgttgtctt cctcataac 1380
accaacctta caaatggtgt cggaccttcc attgcgcgag atattatcaa cctctataac 1440
caacatcatc caatgaatta gaaaggaaca tatgctttat ccaacaccta ttgctaagct 1500
aattgacagt tattcgaagt taccgggtat cgggattaag acggctaccc gtttggcctt 1560

<210> 1173
<211> 2007
<212> DNA

<213> Streptococcus pneumoniae strain CS109

<400> 1173

```
gagtccccgat  tgctgaggat  gcaacctcct  ataatgtcta  tgcggtcatt  gatgagaact  60
ataagtcagc   aacgggtaag  attcttttac  tagaaaaaac  acaattttaac  aagggttcag  120
agggtctttca  taagtatctg  gacatggaag  aatcctatgt  aagagagcaa  ctctcgcaac  180
ctaattctcaa  gcaagtttcc  tttggagcaa  agggaaatgg  gattacctat  gccaatatga  240
tgactatcaa  aaaagagttg  gaaactgcag  aggtcaaggg  gattgatttt  acaaccagtc  300
ccaatcgtag  ttatccaaac  ggacaatttg  cttctagttt  tatcgggtcta  gctcagctcc  360
atgaaaatga  agatggcagc  aagagcttgc  tgggaacttc  tggaaatggag  agttccttga  420
acagtattct  tgcagggaca  gacggcatta  ttacctatga  aaaggatcgt  ctgggcaata  480
ttgtaccctg  aacagaactg  gtatcgcaac  aaactgtgga  tggcaaggat  gtttatataa  540
cattgtctag  tccgctacaa  tctttcatgg  aaactcagat  ggatgccttt  ctagaaaaag  600
taaaaggtaa  gtatatgacc  gcgaccttgg  tcagtgcata  gaccggtgaa  attctcgcta  660
ccaccaacg   acctaccttt  aatgcagata  ctaaaagaag  aatcactgag  gactttgttt  720
ggcgtgatat  tctttatcaa  agtaactatg  aaccaggatc  agcctttaag  gtcagtatgt  780
tagcttcttc  tattgataat  aataccttcc  caagtggaga  atacttcaat  agcagtgaat  840
tcaaaaatagc  ggatgcgacg  actcgagatt  gggatgttaa  tgagggtttg  actactggtg  900
ggatgatgac  tttctcacia  ggtttcgctc  actccagtaa  tggttgaacg  agtctacttg  960
aacaacaaat  gggagatgct  acttgggttg  attatctaaa  acgctttaaa  tttgggggtt  1020
caactcgctt  tggcttgaca  gatgaatacg  ctggtcaact  tccagctgat  aatattgtta  1080
gtattgtctca  aagctcattt  gggcaaggaa  tttcagtgac  acaaacacaa  atgcttcgtg  1140
cctttacagc  tattgctaata  gatggagtta  tgctggagcc  aaaatttata  agtgctattt  1200
atgatactaa  caatcagtct  gtacgtaagt  cacaacaaag  aatagtagga  aatcctgttt  1260
ccaaagaggg  agcaagcaca  actcgaaatc  acatgatctt  agttgggacg  gaccctctat  1320
atggaactat  gtataatcac  tacacaggaa  agccaattat  aacagttcct  ggacaaaatg  1380
tagcagttaa  atccggtacg  gctcaaatac  ctgatgagaa  aaatggagga  tacttggttg  1440
gttctaccaa  ttatatattt  tcagttgtga  ctatgaatcc  tgctgaaaat  cctgatttta  1500
tcttgtatgt  aacggttcaa  cagcctgagc  attattcagg  tatccagttg  ggagaatttg  1560
ccaccccaat  cttggagcgg  gcttcagcta  tgaaagaatc  tctcaatctt  caatctccag  1620
ccaaaaattt  agataaaagt  acgacagaat  cttcttatgc  aatgcctagc  atcaaggata  1680
tttcacctgg  tgagttggcg  gaagccttac  gccgaaatat  tgtgcaacca  atcgttgtag  1740
gtactggaac  aaagattaaa  gagacttctg  tagaagaagg  gaccaatctt  gcaccaaacc  1800
aacaagttct  ccttttatcg  gataaggtag  aagaaattcc  agacatgtat  agctggaaaa  1860
aagagactgc  cgagaccttt  gctaaatggg  tggatattga  actggaattt  gaaggttcag  1920
gttcggttgt  tcagaagcaa  gatgttcgga  ctaatacagc  tatcaaaaac  attaaaaaaa  1980
ttaaatatga  tttaggagac  taatatgt  2007
```

<210> 1174

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1174

gaacgtggtg aagttcgc

18

<210> 1175

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1175

gttactggtg tagaaatggt c

21

<210> 1176

<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1176
tactggtgta gaaatgttc 19

<210> 1177
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1177
gctcaacaag ttccagatta 20

<210> 1178
<211> 2456
<212> DNA
<213> *Staphylococcus aureus* NCTC 8325

<400> 1178
atgaactgat tataacttaac attaaaaaag atgataaacac cttctacacc tccatatcac 60
aaaaaattat aacattatatt tgacataaat actacatttg taatatacta caaatgtagt 120
cttatataag gaggatattg atgaaaaaga taaaaattgt tccacttatt ttaatagttg 180
tagttgtcgg gtttggtata tatttttatg cttcaaaaga taaagaaatt aataatacta 240
ttgatgcaat tgaagataaa aatttcaaac aagtttataa agatagcagt tatatttcta 300
aaagcgataa tgggtgaagta gaaatgactg aacgtccgat aaaaatatat aatagtttag 360
gcgttaaaga tataaacatt caggatcgta aaataaaaaa agtatctaaa aataaaaaac 420
gagtagatgc tcaatataaa attaaaacaa actacggtaa cattgatcgc aacgttcaat 480
ttaattttgt taaagaagat ggtatgtgga agttagattg ggatcatagc gtcattattc 540
caggaatgca gaaagaccaa agcatacata ttgaaaattt aaaatcagaa cgtggtaaaa 600
ttttagaccg aaacaatgtg gaattggcca atacaggaac acatatgaga ttaggcacgc 660
ttccaaagaa tgtatctaaa aaagattata aagcaatcgc taaagaacta agtatttctg 720
aagactatat caacaacaaa tggatcaaaa ttgggtacaa gatgatacct tcgttccact 780
ttaaaccgtg taaaaaaatg gatgaatatt taagtgattt cgcaaaaaaa tttcatctta 840
caactaatga aacagaaagt cgtaactatc ctctagaaaa agcgacttca catctattag 900
gttatgttgg tcccattaac tctgaagaat taaaacaaaa agaataataa ggctataaag 960
atgatgcagt tatttggtaaa aagggactcg aaaaacttta cgataaaaaa ctccaacatg 1020
aagatggcta tcgtgtcaca atcgttgacg ataataagcaa tacaatcgca catacattaa 1080
tagagaaaaa gaaaaaagat ggcaaagata ttcaactaac tattgatgct aaagttcaaa 1140
agagtattta taacaacatg aaaaatgatt atggctcagg tactgctatc caccctcaaa 1200
caggtgaatt attagcactt gtaagcacac cttcatatga cgtctatcca tttatgtatg 1260
gcatgagtaa cgaagaatat aataaattaa ccgaagataa aaaagaacct ctgctcaaca 1320
agttccagat tacaacttca ccagggtcaa ctcaaaaaat attaacagca atgattgggt 1380
taaataacaa aacattagac gataaaacaa gttataaaat cgatggtaaa ggttggcaaa 1440
aagataaatc ttgggggtgg tacaacgtta caagatatga agtggtaaat ggtaatatcg 1500
acttaaaaca agcaatagaa tcatcagata acattttctt tgctagagta gcactcgaat 1560
taggcagtaa gaaatttgaa aaaggcatga aaaaactagg tgttgggtgaa gatataccaa 1620
gtgattatcc attttataat gctcaaattt caaacaataa ttatagatct gaaatattat 1680
tagctgattc aggttacgga caaggtgaaa tactgattaa cccagtacag atcctttcaa 1740
tctatagcgc attagaaaat aatggcaata ttaacgcacc tcacttatta aaagacacga 1800
aaaacaaaagt ttggaagaaa aatattattt ccaaagaaaa tatcaatcta ttaaattgatg 1860
gtatgcaaca agtcgtaaat aaaacacata aagaagatat ttatagatct tatgcaaaact 1920
taattggcaa atccggtact gcagaactca aaatgaaaca aggagaaagt ggcagacaaa 1980
ttgggtgggt tatatcatat gataaagata atccaaacat gatgatggct attaatgtta 2040
aagatgtaca agataaagga atggctagct acaatgccaa aatctcagg t aaagtgtatg 2100

atgagctata	tgagaacggt	aataaaaaat	acgatataga	tgaataacaa	aacagtgaag	2160
caatccgtaa	cgatgggtgc	ttcactgttt	tattatgaat	tattaataag	tgctgttact	2220
tctcccttaa	atacaatttc	ttcattttca	ttgtatgttg	aaagtgcac	tgtaacgagt	2280
ccattttctt	tttttatgga	tttcttattt	gtaatttcag	cgataacgta	caatgtatta	2340
cctgggtatac	agtttaataa	atttaacggt	attcatttgt	gttcctgcta	caacttcttc	2400
tccgtatttta	ccttcttcta	cccataattt	aatgatatt	gaaagtgtat	gcatgc	2456

<210> 1179
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 1179	
atttggtgac	gggtgacttt
	20

<210> 1180
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 1180	
tccaccgttg	ccaatcgca
	19

<210> 1181
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 1181	
agcagcttac	tagatgccgt
	20

<210> 1182
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 1182	
aactgcaaga	gaccccttgg
	20

<210> 1183
 <211> 2535
 <212> DNA
 <213> Streptococcus pneumoniae strain 175

<400> 1183

```

atggcgatag aaaagctatc acccggcatg caacagtatg tggatattaa aaagcaatat 60
ccagatgctt ttttgtctct tcggatgggt gatttttatg aattatttta tgaggatgcg 120
gtcaatgctg cgagattctt ggaaatttcc ttaacgagtc gcaacaagaa tgccgacaat 180
ccgatcccta tggcgggtgt tccctatcat tctgcccaac agtatatcga tgtcttgatt 240
gagcagggtt ataaggtggc tatcgagag cagatggaag atcctaaca agcagttggg 300
gttgttaaac gagaggtgtt tcaggtcatt acgccaggga cagtggtcga tagcagtaag 360
ccggacagtc agaataatth tttggtttcc atagaccgag aaggcaatca atttggccta 420
gcttatatgg atttgggtgac ggggtgacttt tatgtgacag gtcttttgga tttcacgctg 480
gtttgtgggg aaatccgtaa cctcaaggct cgagaagtgg tggtgggtta tgacttgtct 540
gaggaagaag aacaaatcct cagccgccag atgaatctgg tactctctta tgaaaaagaa 600
agctttgaag accttcattt attggatttg cgattggcaa cgggtggagca aacggcatct 660
agtaagctgc tccagtatgt tcatcggaat cagatgaggg aattgaacca cctcaaacct 720
gttatccgct acgaaattaa ggatttcttg cagatggatt atgcgacca ggctagtctg 780
gatttgggtt agaatgctcg ctgaggttaag aaacaaggca gtctttctg gcttttggat 840
gaaacccaaa cggctatggg gatgcgtctc ttgcgttctt ggattcatcg ccccttgatt 900
gataaggaac gaatcgtcca acgtcaagaa gtagtgcagg tctttctcga ccatthcttt 960
gagcgtagtg acttgacaga cagtctcaag ggtgtttatg acattgagcg cttggctagt 1020
cgtgtttctt ttggcaaaac caatccaaag gatctcttgc agttggcgac taccttgtct 1080
agtgtgccac ttggtcgtgc gattttagaa gggatggagc aacctactct agcctatctc 1140
atcgcaaac ttgatgcaat ccctgagttg gagagtttga ttagcgcagc gattgctcct 1200
gaagctcttc atgtgattac agatggggga attatccgga ctggatttga tgagacttta 1260
gacaagtatc gttgcgttct cagagaaggc actagctgga ttgctgagat tgaggctaag 1320
gagcgagaaa actctggtat cagcacgctc aagattgact acaataaaaa ggatggctac 1380
tattttcatg tgaccaatth gcaactggga aatgtgccag cccacttttt ccgcaaggcg 1440
acgctgaaaa actcagaacg ctttggaacc gaagaattag cccgtatcga gggagatatg 1500
cttgaggcgc gtgagaagtc agccaacctc gaatacgaaa tatttatgcg cattcgtgaa 1560
gaggtcggca agtacatcca gcgtttacaa gctctagccc aaggaaattgc gacggttgat 1620
gtcttacaga gtctggcggg tgtggctgaa acccagcatt tgattcgacc tgagtttggg 1680
gacgattcac aaattgatat ccggaaaggg cgccatgctg tcgttgaaaa ggttatgggg 1740
gctcagacct atattccaaa tacgattcag atggcagaag ataccagtat tcaatttggg 1800
acagggccaa acatgagtggt gaagtctacc tatatgcgtc agttagccat gacggcggtt 1860
atggcccagc tgggttcccta tgttcctgct gaaagcgccc atttaccgat ttttgatgcg 1920
atthttaccc gtatcggagc agcagatgac ttggtttcgg gtcagtcaac ctttatgggtg 1980
gagatgatgg aggccaataa tgccatttct catgcgacca agaactctct cattctcttt 2040
gatgaattgg gacgtggaac tgcaacttat gacgggatgg ctcttgctca gtccatcatc 2100
gaatatatcc atgagcacat cggagctaag acctctttg cgaccacta ccatgagttg 2160
actagtctgg agtctagttt acaacacttg gtcaatgtcc acgtggcaac tttggagcag 2220
gatgggcagg tcaccttctt tcacaagatt gaaccgggac cagctgataa atcctacggt 2280
atccatgttg ccaagattgc tggcttgcca gcagaccttt tagcaagggc ggataagatt 2340
ttgactcagc tagagaatca aggaacagag agtctctctc ccatgagaca aactagtct 2400
gtcactgaac agatttctac ctttgatagg gcagaagagc atctatctct agcagaatta 2460
gctaaactgg atgtgtataa tatgacacct atgcaggtta tgaatgtctt agtagagtta 2520
aaacagaaac tataa 2535

```

<210> 1184

<211> 623

<212> DNA

<213> Streptococcus pneumoniae strain StrR-05

<400> 1184

```

tgacgggtga cttttatgtg acaggtcttt tggatttcac gctggtttgt ggggaaatcc 60
gtaacctcaa ggctcgagaa gtgggtgttg gttatgactt gtctgaggaa gaagaacaaa 120
tcctcagccg ccagatgaat ctggtactct cttatgaaaa agaaagcttt gaagaccttc 180
atthatttga tttgcgattg gcaacgggtg agcaaacggc atctagtaag ctgctccagt 240
atgttcatcg gactcagatg agggaaattga accacctcaa acctgttatc cgatacgaaa 300
ttaaggattt cttgcagatg gattatgcga ccaaggctag tctggatttg gttgagaatg 360
ctcgtcaggg taagaaacaa ggcagttctt tctggctttt ggatgaaacc aaaacggcta 420
tggggatgcg tctcttgctg tcttggtatt atcgccctt gattgataag gaacgaatcg 480
tccaacgtca agaagtagtg caggtctttc tcgaccttt ctttgagcgt agtgacttga 540
cagacagctc caagggtgtt tatgacattg agcgcttggc tagtctgtgt tcttttggca 600
aaaccaatcc aaaggatctc ttg 623

```

<210> 1185

<211> 621

<212> DNA
<213> Streptococcus pneumoniae strain StrR-06

```
<400> 1185
tgacgggtga cttttatgtg acaggtcttt tggatttcac gctggtttgt ggggaaatcc 60
gtaacctcaa ggctcgagaa gtggtgttgg gttatgactt gtctgaggaa gaagaacaaa 120
tcctcagccg ccagatgaat ctggtactct cttatgaaaa agaaagcttt gaagaccttc 180
atattattgga tttgcgattg gcaacggtgg agcaaacggc atctagtaag ctgctccagt 240
atgttcacg gactcagatg aggggaattga accacctcaa acctgttatc cgctacgaaa 300
ttaaggattt cttgcagatg gattatgcga ccaaggctag tctggatttg gttgagaatg 360
ctcgctcagg taagaaacaa ggcagtcttt tctggctttt ggatgaaacc aaaacggcta 420
tggggatgcg tctcttgctg tcttggattc atcgccccctt gattgataag gaacgaatcg 480
tccaacgtca agaagtagtg caggtctttc tcgaccattt ctttgagcgt agtgacttga 540
cagacagtct caagggtgtt tatgacattg agcgcttggc tagtcgtgtt tcttttggca 600
aaaccaatcc aaaggatctc t 621
```

<210> 1186
<211> 622
<212> DNA
<213> Streptococcus pneumoniae strain StrR-11

```
<400> 1186
tgacgggtga cttttatgtg acaggtcttt tggatttcac gctggtttgt ggggaaatcc 60
gtaacctcaa ggctcgagaa gtggtgttgg gttatgactt gtctgaggaa gaagaacaaa 120
tcctcagccg ccagatgaat ctggtactct cttatgaaaa agaaagcttt gaagaccttc 180
atattattgga tttgcgattg gcaacggtgg agcaaacggc atctagtaag ctgctccagt 240
atgttcacg gactcagatg aggggaattga accacctcaa acctgttatc cgctacgaaa 300
ttaaggattt cttgcagatg gattatgcga ccaaggctag tctggatttg gttgagaatg 360
ctcgctcagg taagaaacaa ggcagtcttt tctggctttt ggatgaaacc aaaacggcta 420
tggggatgcg tctcttgctg tcttggattc atcgccccctt gattgataag gaacgaatcg 480
tccaacgtca agaagtagtg caggtctttc tcgaccattt ctttgagcgt agtgacttga 540
cagacagtct caagggtgtt tatgacattg agcgcttggc tagtcgtgtt tcttttggca 600
aaaccaatcc aaaggatctc tt 622
```

<210> 1187
<211> 622
<212> DNA
<213> Streptococcus pneumoniae strain StrR-55

```
<400> 1187
tgacgggtga cttttatgtg acaggtcttt tggatttcac gctggtttgt ggggaaatcc 60
gtaacctcaa ggctcgagaa gtggtgttgg gttatgactt gtctgaggaa gaagaacaaa 120
tcctcagccg ccagatgaat ctggtactct cttatgaaaa agaaagcttt gaagaccttc 180
atattattgga tttgcgattg gcaacggtgg agcaaacggc atctagtaag ctgctccagt 240
atgttcacg gactcagatg aggggaattga accacctcaa acctgttatc cgctacgaaa 300
ttaaggattt cttgcagatg gattatgcga ccaaggctag tctggatttg gttgagaatg 360
ctcgctcagg taagaaacaa ggcagtcttt tctggctttt ggatgaaacc aaaacggcta 420
tggggatgcg tctcttgctg tcttggattc atcgccccctt gattgataag gaacgaatcg 480
tccaacgtca agaagtagtg caggtctttc tcgaccattt ctttgagcgt agtgacttga 540
cagacagtct caagggtgtt tatgacattg agcgcttggc tagtcgtgtt tcttttggca 600
aaaccaatcc aaaggatctc tt 622
```

<210> 1188
<211> 599
<212> DNA
<213> Streptococcus oralis ATCC 35037

```
<400> 1188
gggtgacttt tatgtaacgg ggctatttga tttcacgttg gtttgtgggg aaattcgcaa 60
tctcaaggct agagaagtgg tgctgggtta tgacttgtct gaggaagaag aacaaatcct 120
cagtcgtcag atgaatctgg tgctttctta tgagaaggaa ggctttgagg accttcattt 180
actggatcca cgactggcag ctgtggagca agcggcagct agtaagctcc tccagtatgt 240
tcaccggacc cagatgcggg aattgaacca cctcaaacca gttatccgct atgaaatcaa 300
```

```
agattttctta cagatggact atgcgaccaa ggctagtctg gatttggttg agaatgcccg 360
ttcaggcaag aagcaaggca gtcttttctg gcttttagat gaaaccaaga cggctatggg 420
aatgcgtctc ttgcgttctt ggattcatcg tcctttgatt gataaggagc gaatcgtcca 480
gcgtcaagag gtgggtgcagg tctttcttga ccacttcttt gagcgtagtg atttaacgga 540
cagtccttaag ggtgtttatg atatcgaaacg cttggctagt cgggtttctt ttggcaaga 599
```

<210> 1189

<211> 624

<212> DNA

<213> Streptococcus mitis ATCC 49456

<400> 1189

```
ggtgacgggt gacttttatg tgacaggtct tttggatttt acgctggttt gtggggaaat 60
ccgcaatctc aaggctcgag aagtgggtgct gggttatgac ttgtctgagg aagaagaaca 120
gattccttagt cgtcagatga atctgggtact ttcttatgaa aaagaaggct ttgaagacct 180
tcattttactg gattcacgat tggcagctgt ggagcaagcg gcatctagta aactgcttca 240
gtatgttcat cggactcaga tgaggggaatt gaaccacctc aagcctgtta tccgctatga 300
aatcaaagat tttttgcaga tggattatgc gaccaaggct agtctggatt tggttgagaa 360
tgcccggttca ggcaagaagc aaggtagtct tttttggctt ttggatgaaa ccaaacacgc 420
tatgggaatg cgtctcttgc ggtcttggat tcatcgcccc ctgattgata aggaacgaat 480
tgtccaacgc caagaagttg tgcaggtctt tctcgacatc ttctttgagc gtagtgattt 540
gacagacagt ctcaagggtg tttatgacat tgagcgcttg gctagtcgtg tttcttttgg 600
caaaaccaat ccaaaggatc tctt 624
```

<210> 1190

<211> 599

<212> DNA

<213> Streptococcus mitis strain LSPQ 2583

<400> 1190

```
tgacgggtga ctttcaggtg actagtttag aggactttgt cttggctctgc ggggaaatcc 60
gcaatttgaa agctagggaa gtgggtgctgg gctatgcctt gccagaagct gaggagcagg 120
ttttggctgg acagatgaac cttttactgt cctatgtgga gaaggttttg gaggatgttc 180
agctgctggg cgaggagctg tctcctatgg agcgtcaggc agcagggaaa ctgctggagt 240
atgtgcaccg gaccagatg agggagctca gccatttgaa gaaggctcag cattatgaaa 300
tcaaggactt cctgcaaatg gactatgcca ccaaggcgag tctggatttg acagaaaatg 360
ctcgcctcggg caagaagcac ggcagtcttt attggctgat ggacgagact aagacggcca 420
tgggcgggccg catgctgcgc tcttggatcc agcgtccgct gattgatgaa gcgcgaatta 480
gccagcgaca gaatgtcgtt gaggtttttc tggatcattt ctttgagcgg agtgatttga 540
cggagagcct caaggggggtc tatgatatcg agcggctggc tagtcgggtg tcttttggc 599
```

<210> 1191

<211> 622

<212> DNA

<213> Streptococcus mitis ATCC 903

<400> 1191

```
tgacgggtga ctttcaggtg actagtttag aggactttgc cttggctctgc ggggaaatcc 60
gtaatttgaa ggctagggaa gtgggtgctgg gctatgcttt gccagaagct gaggagcagg 120
tcttggctgg acagatgaat cttttgctgt cctatgtaca gacggccttg gacgatgtcc 180
agctgctggg cgaggaaactg tctcctatgg agcgtcaggc agcggggaaa ttgctagagt 240
atgtgcaccg gaccagatg agggagctca gccatttgaa gaaggcccag cattatgaaa 300
tcaaggactt tctgcaaatg gattatgcta ccaaggcgag tctggatttg acagaaaatg 360
ctcgcctcggg taagaaacac ggcagtcttt attggctgat ggacgagacc aagacggcca 420
tgggcgggccg tatgctgcgc tcttggatcc agcgtccgct gattgatgaa gtgcgaatta 480
gccagcgcca gaatgtcgtc gaggtttttc tggaacattt ctttgagcgg agtgatttga 540
cggagagcct caagggagtc tatgatatcg agcggctggc tagtcgggtg tcttttggca 600
agaccaatcc aaaggatctc tt 622
```

<210> 1192

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1192

ggtaaaacag gaacctctaa ct

22

<210> 1193

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1193

ggtaagacag gtacttctaa ct

22

<210> 1194

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1194

catttcaagt aatacaacag aatc

24

<210> 1195

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1195

catttcaagt aacacaactg aatc

24

<210> 1196

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1196

gccatttcaa gtaatacaac agaa

24

<210> 1197

<211> 25

<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1197
caaacgccat ttcaagtaat acaac 25

<210> 1198
<211> 381
<212> DNA
<213> Staphylococcus saprophyticus ATCC 43867

<400> 1198
aacgggcgctc tcgatagaaa aacacgtgaa aatcccaatg attataaaca atcaatatac 60
gattttgtctg aagctgtaac aaaagggtatt aaggaacaaa caaataaaaa ttaataggca 120
acttaaccag aatcggttaaa actatatgac gattctgggtt ttttaaattc aaaaagtttt 180
ctaaaaaatt tacttgcttc tttaaagtat aggtatgaaa tacaattgat taaaatagta 240
aaggaaaatga atcatgaaac aattaactaa gcctttatac ttttacctat tactttttat 300
tacaacaacg ctgattggcg cgttactatt atatttgcca atcacakgta aacatcctat 360
tgattttgtg gacgcccgtt a 381

<210> 1199
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1199
gtatttaaaga agatatccaa aaagc 25

<210> 1200
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1200
tcaaagaaga aactaaaaaa gctgt 25

<210> 1201
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1201
aacgtaggtg tccttcttc 19

<210> 1202
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1202
gtggttgaaat gttccgtaaa ca

22

<210> 1203
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<400> 1203
ggngarmgng gnaaygarat g

21

<210> 1204
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>

<221> misc_feature
<222> (10)..(10)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (13)..(13)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (10)..(10)
<223> i

<220>
<221> modified_base
<222> (13)..(13)
<223> i

<400> 1204
gcnaayaacn tcnwmyatgc c

21

<210> 1205
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 1205
aayacntcna wyatgccngt

20

<210> 1206
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<400> 1206
cknsrngtng artcngcca

19

<210> 1207
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<400> 1207
ccntcntcwc cnggcatytc

20

<210> 1208
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1208
tcaaaaagtt ttctaaaaaa ttac

25

<210> 1209
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1209
acgggcgtcc acaaaatcaa tagga

25

<210> 1210
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1210
accagcttgc ccaatacaaa gg

22

<210> 1211
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1211
attcttgtaa caggctttga tccc

24

<210> 1212
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>

<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 1212
ccnccnrgng gnganacngc wcc

23

<210> 1213
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<400> 1213
aargngngna cngcngcnat hccngg

26

<210> 1214
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1214
ggtaaaaacag gtacctctaa cta

23

<210> 1215
<211> 1337
<212> DNA
<213> Streptococcus pyogenes strain D471

<400> 1215
aacaaaataa aagaacttac ctatthttcca tccaaaatgt ttagcaatca tcactctgcaa 60
ggcaacgat tgcatggcat tgatgtgat agcaactaat atgtcattag aacgttgcg 120
caactagca tctaaataaa gatcgaaatg cagttatcaa aaatgcaagc tcctatcggc 180
ccttgthtta attattactc acattgcctt aatgtattta cttgcttatt attaatthtt 240
ttgctaagtt agtagcgta gttattcatt gaaaggacat tattatgaaa attccttgtaa 300
caggctthta tccctthtggc ggcgaaagcta ttaatcctgc ccttgaagct atcaagaaat 360
tgccagcaac cattcatgga gcagaaatca aatgtattga agttccaacg gthtttcaaa 420
aatctgccga tgtgtctccag cagcatatcg aaagctthta acctgatgca gtcctthtga 480
ttgggcaagc tgggtggccgg actggactaa cgccagaacg cgthgcatat aatcaagacg 540
atgctcgcat tcttgataac gaaggggaatc agcctattga tacacctatt cgtgcagatg 600
gtaaagcagc ttatthtttca accttgccaa tcaaagcgat ggttgctgcc attcatcagg 660
ctgggcttcc tgcttctggt tctaatacag ctggtacctt tgthtgcaat catttgatgt 720
atcaagccct ttacttagtg gataaatatt gtccaaatgc caaagctggg thtatgcata 780

```
ttccctttat gatggaacag gttgttgata aacctaatac agctgccatg aacctcgatg 840
atattacaag aggaattgag gctgctatgt ttgccattgt cgatttcaaa gatcggtccg 900
atttaaaacg ttagggggc gctactcact gactgtgacg ctactaaacc tattttaaaa 960
aaacagagat atgaactaac tctgtttttt ttgtgctaaa aatgaaagac ctagggaac 1020
ttttcatcgg tctttctcaa ttgtcatctt aatctaatac tacttctaac atcagcgggt 1080
atagtttgcc agtaattaag aaacgttggt gatctaaatg agcaatccca ttcaaaacat 1140
taaggtcagg gtaatgggac ttatcaagat ttaaggcttt taacaaagga ctaatatcat 1200
aggtggctac cacctttcca gaatcaggtt ggagtttgac aatagtattg gtttgccaaa 1260
tattggcata gagataacca tctacatact ctaattcggt aagcattgag ataggacac 1320
tttctatagc aactagt 1337
```

<210> 1216
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1216
ggtaagactg gtacatcaaa cta 23

<210> 1217
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1217
caaagccat ttcaagtaac acaac 25

<210> 1218
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1218
caaagccat ttcaagtaac acaac 25

<210> 1219
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1219
caaagctat ttcaagtaac acaac 25

<210> 1220
<211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1220
caaacgccat ttcaagtaat acgac

25

<210> 1221
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 1221
gayacnccng gncaygtnga ytt

23

<210> 1222
<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<400> 1222
atygayacnc cnggnca ygt ngaytt

26

<210> 1223
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>

<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<400> 1223
ayntcnarrt gnarytcrc ccatncc

26

<210> 1224
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<400> 1224
ccngynhtny tngarccnat natg

24

<210> 1225
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (21)..(21)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (24)..(24)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base

<222> (15)..(15)

<223> i

<220>

<221> modified_base

<222> (18)..(18)

<223> i

<220>

<221> modified_base

<222> (21)..(21)

<223> i

<220>

<221> modified_base

<222> (24)..(24)

<223> i

<400> 1225

tanccraaca tytcnsmnar nggnac

26

<210> 1226

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (3)..(3)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (9)..(9)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base
<222> (9)..(9)
<223> i

<400> 1226
gtmrmtanc craacatytc

20

<210> 1227
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<400> 1227
gtncncytnk cngaratgtt yggnta

26

<210> 1228
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (24)..(24)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<400> 1228
gtncncytnk cngaratgtt yggntaygc

29

```
<210> 1229
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<400> 1229
      tccatytgng cngcncngt natcat

<210> 1230
<211> 2145
<212> DNA
```

<213> Escherichia coli

```

<400> 1230
tgaacgccta aaagataaac gaggaataca atggctcgta caacacccat cgcacgctac 60
cgtaacatcg gtatcagtcg gcacatcgac gccggtaaaa ccactactac cgaacgtatt 120
ctgtttctaca ccggtgtaaa ccataaaatc ggtgaagttc atgacggcgc tgcaaccatg 180
gactggatgg agcaggagca ggaacgtggt attaccatca cttccgctgc gactactgca 240
ttctggtctg gtatggctaa gcagtatgag ccgcacgca tcaacatcat cgacaccccg 300
gggcacgttg acttcacaat cgaagtagaa cgttccatgc gtgttctcga tgggtgcggt 360
atggtttact gcgcagttgg tgggtgttcag ccgcagctcg aaaccgtatg gcgtcaggca 420
aacaatatata aagttccgcg cattgcgttc gttaacaaaa tggaccgcat ggggtgcgaac 480
ttcctgaaag ttgttaacca gatcaaaacc cgtctgggcg cgaacccggt tccgctgcag 540
ctggcgattg gtgctgaaga acatttcacc ggtgtgtgtg acctgggtgaa aatgaaagct 600
atcaactgga acgacgctga ccagggcgta accttcgaat acgaagatat cccggcagac 660
atggttgaac tggctaacga atggcaccag aacctgatcg aatccgcagc tgaagcttct 720
gaagagctga tggaaaaata cctgggtggt gaagaactga ctgaagcaga aatcaaaggt 780
gctctgcgtc agcgcgttct gaacaacgaa atcatcctgg gcggttaattg ttctgcgttc 840
aagaacaaag gtgttcaggc gatgctggat gacggtaaag acactccggc tgaacgtcac 960
gacgtacctg cgatcaacgg tatectggac gcgttcaaaa tcgctaccga cccgtttgtt 1020
gcaagtgatg acgagccgtt ctctgcactg gcgttcaaaa actctggtga taccgtactg 1080
ggtaacctga cttcttccg tgtttactcc ggtgtgtgta actctggtga cgtaacaaa 1140
aactccgtga aagctgcacg tgagcgtttc ggtcgtatcg ttcagatgca tctgaaagac 1200
cgtgaagaga tcaaagaagt tcgcgcgggc gacatcgctg ctgctatcgg tctgaaagac 1260
gtaaccactg gtgacacct gtgtgacccg gatgcgccga tcattctgga acgtatggaa 1320
ttccctgagc cggtaatctc catcgcagtt gaaccgaaaa ccaaagctga ccaggaaaaa 1380
atgggtctgg ctctgggccc tctggctaaa gaagaccgt ctttccgtgt atggactgac 1440
gaagaatcta accagaccat catcgcgggt atgggcgaac tgcacctcga catcatcgtt 1500
gacgcatga agcgtgaatt caacgttgaa gcgaacgtag gtaaaccgca ggttgcttac 1560
cgtgaaacta tccgccagaa agttaccgat gttgaaggta aacacgcgaa acagtctggt 1620
ggtcgtggtc agtatggtca tgttgttatc gacatgtacc cgctggagcc gggttcaaac 1680
ccgaaaggct acgagttcat caacgacatt aaagggtggt taatccctgg cgaatacatc 1740
ccggccggtg ataaaggtag tctgcacttc ggttcttacc atgacgttga ctcctctgaa 1800
gtagtagaca tgggtattcg tctatcgcc tttaaagaag gctttaagaa agcgaaccca 1860
ctggcgttta aactggctgc gaaggttgaa gtagaaactc cggaagagaa caccgggtgac 1920
gttctgcttg agccgatcat tcgtcgtggt atgctcaaag gtcaggaatc tgaagttact 1980
gttatcggtg acttgagccg tctgaaatgt tccacgctg tccgatacgc aactcagctg 2040
ggcgtaaga tccacgctg tgcatcatc actatggaat tcctgaagta tgatgaagcg 2100
cgttctctga ccaaaggctc cgtaattgaa gcccggtgta aataa 2145
ccgagtaacg ttgctcaggc

```

<210> 1231

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1231

gcgagccga agataaaaaa gaacctctgc tgctcgc

37

<210> 1232

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1232

ggagccgcgc gatatttataa atgaatgttg ataaccggct cc

42

<210> 1233
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1233
gcgagcggtta ctggtgtaga aatgttccgg ctgcg

35

<210> 1234
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1234
actaaataaa cgctcattcg

20

<210> 1235
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1235
gcgagccgaa gttgaagttg ttggtattgc tggctcgc

38

<210> 1236
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1236
gcgagccgtg gtgaagttcg cggttggtggc tcgc

34

<210> 1237
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1237
gcgagccgcg aaatcgaagt tgctgtatta gggctcgc

38

<210> 1238

<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1238
gcgagcggcg ttaatttttg caccgaagaa gagctcgc 38

<210> 1239
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1239
gcgagcgcag acctttcagc agaggaggct cgc 33

<210> 1240
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1240
gcgagccggc aagacaatat gacagcaaaa tcgctcgc 38

<210> 1241
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1241
gcgagcgggg aacgaggatg atttgattgg ctgcg 35

<210> 1242
<211> 600
<212> DNA
<213> Enterococcus faecium strain BM4147-1

<400> 1242
ttcttagaga cattgaatat gccttatgtc ggcgagggcg tattgaccag tgcattgtgcc 60
atggataaaa tcatgaccaa gtatatatta caagctgctg gtgtgccgca agttccttat 120
gtaccagtac ttaagaatca atggaaagaa aatcctaata aagtatttga tcaatgtgaa 180
ggttcttttg tttatccgat gtttgtcaaa cctgcgaata tgggttctag tgtcggcatt 240
acaaggcgag aaaaccgaga agagctgcaa aatgcttttag caacagccta tcagtatgat 300
tctcgagcaa tcgttgaaca aggaattgaa gcgcgcgaaa tcgaagttgc tgtattagga 360
aatgaagatg ttcggacgac tttgcctggc gaagtcgtaa aagacgtagc attctatgat 420
tatgaagcca aatatatcaa taataaaatc gaaatgcaga ttccagccga agtgccggaa 480
gaagtttatc aaaaagcgca agagtacgag aagtttagctt acacgatgtt aggtggaagc 540

ggattgagcc ggtgcgatct ctttttgaca aataaaaaatg aattattcct gaatgaatta 600

<210> 1243

<211> 2275

<212> DNA

<213> *Enterococcus faecalis*

<400> 1243

ggtaccaaag	aaaaaaacga	acgccacaac	caacagcctc	taaagcaaca	cctgcttctg	60
aaattgaggg	agatttagca	aatgtcaatg	agattctttt	ggttcacgat	gatcgtgtcg	120
ggtcagcaac	gatgggaatg	aaagtcttag	aagaaatfff	agataaagag	aaaatttcaa	180
tgccgattcg	aaaaattaat	attaatgaat	taactcaaca	aacacaggct	ttaattgtca	240
caaaagctga	actaacggaa	caagcacgta	aaaaagcacc	gaaagcgaca	cacttatcag	300
taaaaagtta	tggttaatcc	ccaaaaatat	gaaacagtgg	gtttcgctct	taaaagaaa	360
tgcctagaga	ggaagaaaac	aatggaaaat	cttacgaata	tttcaattga	attaaatcaa	420
cagtttaata	caaaagaaga	agctattcgc	ttttccggcc	agaaactagt	cgaggcaggc	480
tgtgttgagc	ccgcttatat	cgaagcaatg	attgaaagag	accaattgct	atctgccc	540
atggggaatt	ttattgccat	tcctctggga	acagaagaag	ccaaaaaatt	agtgaaaaaa	600
tcaggaatct	gtgtagtgc	agtcccagag	ggcgttaatt	ttggcaccga	agaagatgaa	660
aaaattgcta	ccgtattatt	tgggattgcc	ggagtcggtg	aagaacattt	gcaattagtc	720
caacaaattg	cactttattg	tagtgatatg	gataacgtgg	tgcaacttgc	cgatgcatta	780
agtaaagaag	aaataacaga	aaatttagcc	attgcttaaa	ggagagaata	agaatgaacg	840
cagtacattt	tggagcagga	aatattggac	gcggctttat	tggcgaaatt	ttagctaaaa	900
cggtgtttcat	attaccgttt	gtggatgtta	atggaaaacca	tcatcaagcg	ttaaaagaac	960
gtaaaagtta	tacaattgaa	ttggccgatg	cctcacatca	acaaattaac	gttgaanaatg	1020
tgaccgggtt	aaataacatg	acagaaccag	aaaaagtagt	agaagcaatt	gcggaagccg	1080
atttagtcac	gacggcaatt	ggtcctaata	ttttaccaag	aattgctgaa	ttaattgctc	1140
aaggaattga	tgcacgtgcc	gaagcaaat	gtcaaaacgg	cccgcctggat	attatcgctt	1200
gtgaaaatat	gattggtggt	tcaacccttt	tagcagaaga	agtgcccata	atatttgaaa	1260
aaccagctt	atctgaacaa	tggattggtt	ttcctgatgc	ggcagttgat	cggattgttc	1320
cattacaaaa	acataaagat	ccactttttg	ttcaagttga	gcctttttgt	gaatgggtca	1380
ttgatgatac	caaccgaaaa	gccaaagaga	ttcagttaga	agggcgtcatt	acttgctgat	1440
tagagccgta	tattgaacga	aaattattta	gtgtaaccag	tggccatgct	acagttgcct	1500
atacaggggc	gttggttaggc	tatcaaacca	ttgacgaagc	gatgcaggac	gccttagtgg	1560
tagcgcaact	caaatcagtt	ttgcaggaaa	ccggtaaact	tttagtggcc	aaatggaatt	1620
ttgatgaaca	agaacatgca	gcctatattg	aaaaaattat	caaccgtttc	caaaaataat	1680
atatttcaga	tgctattaca	cgtgtagcac	ggacaccaat	cagaaaatta	ggtgcgcaag	1740
aacggtttat	tcgaccaatc	cgtgaattac	aggaacgcaa	tctagtgtcg	gccgcattta	1800
tagcaatgat	tggattgtgc	tttaattatc	atgatccaga	agatgaacaa	agccgtcaat	1860
tacaggaaat	gcttgaccaa	gaaagtgttg	atacagtggg	tcgctgaagt	aacgggcatt	1920
gaagatccag	aaacggttta	aaatattaaa	caaacagtag	aactgctatg	cgcgaccaca	1980
agtagcataa	ttaacaaaat	ccttctacca	agatacttca	catttcttaa	ttaaagaaaa	2040
aacaaccgcg	cctcacctga	gccgaccccc	aaaagttaga	cctagaaatc	taacttttgg	2100
aggttttttt	gtatggcaaa	atacagtttt	gaaattttaa	cttaaacttg	ttcatgacta	2160
cttatatggt	caaggaggtc	taagggtttc	cgcaaagaag	tatgggttta	aagatagtct	2220
caataaagca	aatggataaa	tgcctataaa	gaacttggtg	aagaaggggg	gatcc	2275

<210> 1244

<211> 442

<212> DNA

<213> *Staphylococcus aureus* subsp. *aureus* ATCC 25923

<400> 1244

gatcaatctt	tgtcgggtaca	cgatattctt	cacgactaaa	taaacgctca	ttcgcgattt	60
tataaatgaa	tgttgataac	aatgttgat	tatctactga	aatctcatta	cgttgcatcg	120
gaaacattgt	gttctgtatg	taaaagccgt	cttgataatc	tttagtagta	ccgaagctgg	180
tcatacgaga	gttatatttt	ccagccaaaa	cgatattttt	ataatcatta	cgtgaaaaag	240
gtttcccttc	attatcacac	aaatatttta	gcttttcagt	ttctatatca	actgtagctt	300
ctttatccat	acgttgaata	attgtacgat	tctgacgcac	catcttttgc	acacctttaa	360
tgttatttgt	tttaaaagca	tgaataagtt	tttcaacaca	acgatgtgaa	tcttctaaga	420
agtcaccgta	aatgaagga	tc				442

<210> 1245

<211> 845
 <212> DNA
 <213> *Bacillus anthracis* strain CIP 9444

<400> 1245
 gatggcgga agctaccaga aatctacaac gcccttacgg taaaacagag caacgaaaaac 60
 ggaacaagca ttaacttaac atttgaagtt gcacttcatt taggtgatga cacagttcgt 120
 acagttgcaa tgtcttccac agatggactt gtctcgaggc cagaagtaga agatactggt 180
 aaagcaatct ctgtaccagt tggatgatga acacttgggt gtgtatttaa cgtattaggt 240
 gatgcaattg acttagatgg tgaggttcct gcggatgtac gtcgtgatcc aattcaccgt 300
 caagcacctg cattcgaaga attatctact aaagtagaaa ttcttgaaac tggattataaa 360
 gtagtagact tacttgctcc ttacattaag ggtggtgaaga tgggtctatt cgggtggtgcc 420
 ggtgtaggta aaacggtatt aattcaggaa ttaatcaata acatcgcaaca agaacacggt 480
 ggtatctctg tattcgctgg ttaggtgag cgtactcgtg agggtaatga cttataccac 540
 gaaatgagcg attctggcgt aattaagaaa actgcgatgg tattcggaaca aatgaacgag 600
 ccacctggag cagtcgaacg tgttgcggtt acaggtttta caatggctga gcatttcctg 660
 gatgagcaag gacaagatgt acttctgttc atcgataata tcttcggttt cagcgaagca 720
 ggttctgaag tatctggcct tcttgccgt atgccatctg cggtaggtta ccaaccaaca 780
 cttgcaacag aaatgggtca attacaagag cgtattacat ctacaaataa agggctctatc 840
 acgtc 845

<210> 1246
 <211> 656
 <212> DNA
 <213> *Bacillus mycoides* ATCC 11986

<400> 1246
 tgcacttcat ttaggtgatg acacagttcg tacagttgca atgtcttcca cagatggact 60
 tggtcgtggc acagaagtag aagatactgg taaagcaatc tctgtaccag ttggtgatgt 120
 aacacttgggt cgtgtattta acgtattagg tgatgcaatt gacttagatg gtgatgttcc 180
 tgcggatgta cgtcgtgatc caattcaccg tcaagcgctt gcattcgaag agttatctac 240
 taaagtagaa attcttgaaa ctggtattaa agtagtagac ttacttgctc cttacattaa 300
 ggggtggtgaag attggtctat tcggtggtgc cggcgtagggt aaaacagtat taattcagga 360
 attaattaat aacatcgcac aagagcacgg tggatctctt gtattcgctg gtgtaggtga 420
 gcgtactcgt gaaggtaacg acttatacca cgaaatgagc gattctggcg taattaagaa 480
 aactgcgatg gtattcggac aaatgaacga gccacctgga gcacgtcaac gtggtgcatt 540
 aacaggttta acaatggctg aacatttccg tgatgagcaa ggacaagacg tactattgtt 600
 catcgataac atcttccgtt tcacgcaagc gggttctgaa gtatctgccc ttcttg 656

<210> 1247
 <211> 791
 <212> DNA
 <213> *Bacillus thuringiensis* ATCC 10792

<400> 1247
 cgaaaacgga agtattaact taacatttga agttgcactt catttaggtg atgatacagt 60
 tcgtacagtt gcgatgtctt ccacagatgg acttggtcgt ggcacagaag tagaagatac 120
 tggtaaacca atctctgtac cagttggtga tgtaacactt ggtcgcgtat ttaacgtatt 180
 aggtgatgca attgacttag atgggtgaggt tcctgcagat gtacatcgtg atccaattca 240
 ccgtcaagca cctgcattcg aagaattatc tactaaagta gaaattcttg aaactgggtat 300
 taaagtagta gacttacttg ctccctacat taagggtgggt aagatcggcc tattcgggtg 360
 tgccggcgta ggtaaaacag tattaattca ggaattaat aacaacatcg cacaagagca 420
 cggtggtatc tctgtattcg ctggtgtagg tgagcgtact cgtgagggtg atgacttata 480
 ccacgaaatg agcgattctg gcgtaatcaa gaaaactgcg atgggtattcg gacaaatgaa 540
 cgagccacct ggagcacgtc aacgtgttgc attaacaggt ttaacaatgg ctgagcattt 600
 ccgtgatgag caaggacaag acgtacttct gttcatcgat aacatcttcc gtttcacgca 660
 agcgggttct gaagtatctg cccttcttgg tctgatgcca tctgcggtag gttaccaacc 720
 aacacttgca acagaaatgg gtcaattaca agagcgtatt acatctacaa ataaagggtc 780
 tatcacgtct a 791

<210> 1248
 <211> 825
 <212> DNA

<213> *Bacillus thuringiensis* strain BGSC 4AC1

```
<400> 1248
atctacaatg cccttacggt aaaacaaagc aacgaaaacg gaagcatgaa cttaacattt 60
gaagttgcac ttcatttagg tgatgataca gttcgtacag ttgcgatgtc ttccacagat 120
ggacttggtc gtggcacaga agtagaagat actggtaaag caatctctgt accagttggg 180
gatgcaacac ttggacgtgt attcaacgta ttaggtgatg caattgactt agatgggtgaa 240
cttcctgcgg atgtacaccg tgatccaatt caccgtcaag cacctgcatt cgaagaatta 300
tctactaaag tagaaattct tgaaactggg attaaagtag tagacttact tgctccttac 360
attaagggtg gtaagatcgg cctattcggg ggtgccggcg taggtaaaac agtattaatt 420
caggagttaa tcaataacat cgcacaagag cacggtggta tctctgtatt cgctgggtgta 480
ggtgagcgta ctcgtagagg taatgactta taccacgaaa tgagcgattc tggcgtaatc 540
aagaaaactg cgatggtatt cggacaaatg aacgagccac ctggagcacg tcaacgtggt 600
gcattaacag gtttaacaat ggctgagcat ttccgtgatg agcaaggaca agacgtactt 660
ctgttcacgc ataacatctt ccgtttcacg caagcgggtt ctgaagtatc tgcccttctt 720
ggctcgtatgc catctgcggg aggttaccaa ccaacacttg caacagaaat ggggtcaatta 780
caagagcgta ttacatctac aaataaaggg tctatcacgt ctatc 825
```

<210> 1249

<211> 775

<212> DNA

<213> *Bacillus thuringiensis* strain HER 1236

```
<400> 1249
atctacaacg cccttacggt aaaacaaagc aacgaaaacg gaagtattaa cttaacattt 60
gaagttgcac ttcatttagg tgatgataca gttcgtacag ttgcgatgtc ttccacagat 120
ggacttggtc gtggcacaga agtagaagat actggtaaag caatctctgt accagttggg 180
gatgtaacac ttgggtcggt atttaacgta ttaggtgatg caattgactt agatgggtgag 240
gttcctgcag atgtacatcg tgatccaatt caccgtcaag cacctgcatt cgaagaatta 300
tctactaaag tagaaattct tgaaactggg attaaagtag tagacttact tgctccttac 360
attaagggtg gtaagatcgg cctattcggg ggtgccggcg taggtaaaac agtattaatt 420
caggaattaa ttaacaacat cgcacaagag cacggtggta tctctgtatt cgctgggtgta 480
ggtgagcgta ctcgtagagg taatgactta taccacgaaa tgagcgattc tggcgtaatc 540
aagaaaactg cgatggtatt cggacaaatg aacgagccac ctggagcacg tcaacgtggt 600
gcattaacag gtttaacaat ggctgagcat ttccgtgatg agcaaggaca agacgtactt 660
ctgttcacgc ataacatctt ccgtttcacg caagcgggtt ctgaagtatc tgcccttctt 720
ggctcgtatgc catctgcggg aggttaccaa ccaacacttg caacagaaat gggtc 775
```

<210> 1250

<211> 832

<212> DNA

<213> *Bacillus weihenstephanensis* strain WSBC 10204

```
<400> 1250
ccagcaatct acaacgccct tacggtaaaa caaagcaacg aaaacggagc gagcatcaac 60
ttaacatttg aagttgcact tcatttaggt gatgacacag ttcgtacagt tgcatgtct 120
tccacagatg gacttggtcg tggcacagaa gtagaagata ctggtaaagc aatctctgta 180
ccagttggtg atgtaacact tggtcgcgta ttcaacgtat taggtgatgc aattgactta 240
gatggtgatg ttctgcgga tgtacgtcgt gatccaattc accgtcaagc acctgcattc 300
gaagaactat ctacaagaat agaaattctt gaaactggta ttaaagtagt agatttactt 360
gctccttaca ttaagggtgg taagatcggg ctattcgggtg gtgccgggtg aggtaaaacg 420
gtattaattc aggaattaat taacaacatc gcacaagagc acggtgggtat ctctgtattc 480
gctggtgatg gtgagcgtag tctgtagggg aatgacttat accacgaaat gagcgattct 540
ggcgtaatta agaaaactgc gatggtattt ggacaaatga acgagccacc tggagcacgt 600
caacgtgttg cattaacagg tttaacaatg gctgaacatt tccgtgatga gcaaggacaa 660
gacgtactat tgttcacgta taacatcttc cgtttcacgc aagcagggtt tgaagtatct 720
gcccttcttg gtcgtatgcc atctgcggta ggttaccaac caacacttgc aacagaaatg 780
ggtcaattac aagagcgtat tacatctaca aataaagggt ctatcacgtc ta 832
```

<210> 1251

<211> 802

<212> DNA

<213> *Bacillus thuringiensis* strain HER 1418

```
<400> 1251
aaatctacaa cgcccttacg gtaaaacaaa gcaacgaaaa cggaagtatt aacttaacat 60
ttgaagttgc acttcattta ggtgatgata cagttcgtac agttgcatg tcttccacag 120
atggacttgt tcgtggcaca gaagtagaag atactggtaa accaatctct gtaccagttg 180
gtgatgtaac acttggtcgc gtattttaacg tattaggtga tgcaattgac ttagatgggtg 240
aggttcctgc agatgtacat cgtgatccaa ttcaccgtca agcacctgca ttcgaagaat 300
tatctactaa agtagaaatt cttgaaactg gtattaaagt agtagactta cttgctcctt 360
acattaaggg tggttaagatc ggcctattcg gtggtgccgg cgtaggtaaa acagtattaa 420
ttcaggaatt aattaacaac atcgcacaa agcacggtgg tatctctgta ttcgctgggtg 480
taggtgagcg tactcgtgag ggtaatgact tataccacga aatgagcgat tctggcgtaa 540
tcaagaaaac tgcgatggta ttcggacaaa tgaacgagcc acctggagca cgtcaacgtg 600
ttgcattaac aggtttaaca atggctgagc atttccgtga tgagcaagga caagacgtac 660
ttctgttcat cgataacatc ttccgtttca cgcaagcggg ttctgaagta tctgcccttc 720
ttggtcgtat gccatctgcg gtaggttacc aaccaacact tgcaacagaa atgggtcaat 780
tacaagagcg tattacatct ac 802
```

```
<210> 1252
<211> 823
<212> DNA
<213> Bacillus thuringiensis strain HER 1410
```

```
<400> 1252
aaatctacaa cgcccttacg gtaaaacaaa gcaacgaaaa cggaagtatt aacttaacat 60
ttgaagttgc acttcattta ggtgatgata cagttcgtac agttgcaatg tcttccacag 120
atggacttgt tcgtggcaca gaagtagaag atactggtaa accaatctct gtaccagttg 180
gtgatgtaac acttggtcgc gtattttaacg tattaggtga tgcaattgac ttagatgggtg 240
aggttcctgc agatgtacat cgtgatccaa ttcaccgtca agcacctgca ttcgaagaat 300
tatctactaa agtagaaatt cttgaaactg gtattaaagt agtagactta cttgctcctt 360
acattaaggg tggttaagatc ggcctattcg gtggtgccgg cgtaggtaaa acagtattaa 420
ttcaggaatt aattaacaac atcgcacaa agcacggtgg tatctctgta ttcgctgggtg 480
taggtgagcg tactcgtgag ggtaatgact tataccacga aatgagcgat tctggcgtaa 540
tcaagaaaac tgcgatggta ttcggacaaa tgaacgagcc acctggagca cgtcaacgtg 600
ttgcattaac aggtttaaca atggctgagc atttccgtga tgagcaagga caagacgtac 660
ttctgttcat cgataacatc ttccgtttca cgcaagcggg ttctgaagta tctgcccttc 720
ttggtcgtat gccatctgcg gtaggttacc aaccaacact tgcaacagaa atgggtcaat 780
tacaagagcg tattacatct acaaataaag ggtctatcac gtc 823
```

```
<210> 1253
<211> 798
<212> DNA
<213> Bacillus cereus ATCC 13472
```

```
<400> 1253
ccagaaatct acaatgccct tacggtaaaa caaagcaacg aaaacggaag catgaactta 60
acatttgaag ttgcacttca tttaggtgat gatacagttc gtacagttgc gatgtcttcc 120
acagatggac ttgttcgtgg cacagaagta gaagatactg gtaaagcaat ctctgtacca 180
gttggtgatg caacacttgg acgtgtattc aacgtattag gtgatgcaat tgacttagat 240
gggtgaacttc ctgcggatgt acaccgtgat ccaattcacc gtcaagcacc tgcattcgaa 300
gaattatcta cttaaagtaga aattcttgaa actggtatta aagtagtaga cttacttgct 360
ccttacatta aggggtggtaa gatcggccta ttcgggtgggtg ccggcgtagg taaaacagta 420
ttaattcagg aattaatcaa taacatcgca caagagcatg gtggtatctc tgtattcgct 480
ggtgtaggtg agcgtactcg tgagggtaat gacttatacc acgaaatgag cgattctggc 540
gtaatcaaga aaactgcgat ggtattcgga caaatgaacg agccacctgg agcacgtcaa 600
cgtgttgcac taacaggttt aacaatggct gagcatttcc gtgatgagca aggacaagac 660
gtacttctgt tcatcgataa catcttccgt ttcacgcaag cgggttctga agtatctgcc 720
cttcttggtc gtatgccatc tgcggtaggt taccaaccga cacttgcaac agaaatgggt 780
caattacaag agcgtatt 798
```

```
<210> 1254
<211> 767
<212> DNA
<213> Bacillus cereus ATCC 7064
```

```
<400> 1254
catttgaagt tgcacttcat ttaggtgatg acacagttcg tacagttgca atgtcttcca 60
cagatggact tgttcgtggc acagaagtag aagatactgg taaagcaatc tctgtaccag 120
ttgggtgatgc aacacttggg cgtgtattta acgtattagg tgatgcaatt gacttagatg 180
gtgagggtcc tgcggatgta cgtcgtgatc caattcaccc tcaagcacct gcattcgaag 240
aattatctac taaagtagaa attcttgaaa ctgggtattaa agtagtagac ttacttgctc 300
cttacattaa ggggtggtaa atcgggtctat tccgggtggc cgggtgtaggt aaaacgggat 360
taattcagga attaataaat aacatcgcac aagaacacgg tgggtatctc gtattcgtcg 420
gtgtaggtga gcgtactcgt gagggtaatg acttatacca cgaaatgagc gattctggcg 480
taattaagaa aactgcgatg gtattcggac aaatgaacga gccacctgga gcacgtcaac 540
gtgttgcggt aacaggttta acaatggctg agcatttccg tgatgagcaa ggacaagacg 600
tacttctgtt catcgataat atcttccgtt tcacgcaagc aggttctgaa gtatctgccc 660
ttcttggccg tatgccatct gcggtaggtt accaaccaac acttgcaaca gaaatgggtc 720
aattacaaga gcgtattaca tctacaaata aagggtctat cacgtct 767
```

```
<210> 1255
<211> 1174
<212> DNA
<213> Staphylococcus aureus strain C-14
```

```
<220>
<221> misc_feature
<222> (713)..(713)
<223> n represents any nucleotide
```

```
<400> 1255
gaaatgcgtg aatcattttt agattatgcg atgagtgtta tcgttgctcg tgcattgccca 60
gatgttcgtg acgggtttaa accagtagat cgtcgtatata tatatggatt aaatgaacaa 120
ggatgacac cggataaaatc atataaaaaa tcagcacgta tcgttggtga cgtaatgggt 180
aaatatcacc ctcatgggtga cttatctatt tatgaagcaa tggtagctat ggctcaagat 240
ttcagttatc gttatccgct tgttgatggc caaggtaact ttgggtcaat ggatggagat 300
ggcgcagcag caatgcgtta tactgaagcg cgtatgacta aaatcacact tgaactgtta 360
cgtgatatta ataaagatac aatagatttt atcgataact atgatggtaa tgaagagag 420
ccgtcagctt tacctgctcg attccctaac ttattagcca atgggtgcac aggtatcgcg 480
gtaggatatt caacgaatat tccaccacat aacttaacag aattaatcaa tgggtgtactt 540
agcttaagta agaaccctga tatttcaatt gctgagttaa tggaggatat tgaaggctct 600
gatttcccaa ctgctggact tatttttaggt aagagtgggt ttagacgtgc atatgaaaca 660
ggctcgtgggt caattcaaat gcgttctcgt gcagttattg aagaacgtgg agnccgacgt 720
caacgtattg ttgtcactga aattcctttc caagtgaata aggtcgtat gattgaaaaa 780
attgcagagc tcgttcgtga caagaaaatt gacgggtatca ctgatttacg tgatgaaaca 840
agtttacgta ctgggtgtgc tgctcgttatt gatgtgcgta aggatgcaaa tgctagtgtc 900
attttaataa acttatacaa acaaacacct cttcaaacat catttggtgt gaatatgatt 960
gcacttgtaa atggttagacc gaagcttatt aattttaaag aagcgtttgg acattattta 1020
gagcatcaaa agacagttgt tagaagacgt acgcaatata acttacgtaa agctaaagat 1080
cgtgcccaca ttttagaagg attacgtatc gcacttgacc atatcgatga aattatttca 1140
acgattcgtg agtcagatac agataaagtt gcaa 1174
```

```
<210> 1256
<211> 780
<212> DNA
<213> Bacillus weihenstephanensis strain WSBC 10209
```

```
<400> 1256
atctacaacg cccttacggg aaaacaaagc aacgaaaacg gagcaagcat taacttaaca 60
tttgaagttg cacttcattt aggtgatgac acagttcgta cagttgcaat gtcttcaca 120
gatggacttg ttcgtggcac agaagtagaa gatactggta aagcaatctc tgtaccagtt 180
ggatgatgaa cacttggctg tgtatttaac gtattaggtg atgcaattga cttagatgga 240
gatgttctcg cggatgtacg tcgtgatcca attcacgctc aagcgcctgc attcgaagag 300
ttatctacta aagtagaaat tcttgaaact ggtattaaag tagtagactt acttgctcct 360
tacattaagg gtggttaagat cgggtctattc ggtgggtgccc gtgtaggtaa aacagtatta 420
attcaggaat taacttaacaa catcgacaaa gagcacggtg gtatctctgt attcgtggt 480
gtaggtagag gtactcgtga aggtaacgac ttataccacg aaatgagcga ttctggcgta 540
attaagaaaa ctgcgatggg attcggacaa atgaacgagc cacctggagc acgtcaacgt 600
```

gttgcatataa cagggtttaac aatggctgaa catttccgtg atgagcaagg gcaagacgta 660
ctattgttca tcgataacat cttccgtttc acgcaagcgg gttctgaagt atctgccctt 720
cttggtcgta tgccatctgc ggtagggttac cagccaacac ttgcaacaga aatgggtcaa 780

<210> 1257
<211> 817
<212> DNA
<213> *Bacillus anthracis* strain CIP 7700

<400> 1257
ctaccagaaa tctacaacgc ccttacggta aaacagagca acgaaaacgg aacaagcatt 60
aacttaacat ttgaagttgc acttcattta ggtgatgaca cagttcgtac agttgcaatg 120
tcttccacag atggacttgt tcgtggcaca gaagtagaag atactggtaa agcaatctct 180
gtaccagttg gtgatgcaac acttggctcg gtatttaacg tattaggtga tgcaattgac 240
ttagatgggtg aggttcctgc ggatgtacgt cgtgatccaa ttcaccgtca agcacctgca 300
ttcgaagaat tatctactaa agtagaaatt cttgaaactg gtattaaagt agtagactta 360
cttgctcctt acattaaggg tggtaagatc ggtctattcg gtgggtgccgg ttaggtataa 420
acgggtattaa ttcaggaatt aatcaataac atcgacacag aacacgggtg tatctctgta 480
ttcgtctgggtg taggtgagcg tactcgtgag ggtaatgact tataccacga aatgagcgat 540
tctggcgtaa ttaagaaaac tgcgatggta ttccggacaa tgaacgagcc acctggagca 600
cgtcaacgtg ttgctgtaac aggtttaaca atggctgagc atttccgtga tgagcaagga 660
caagatgtac ttctgttcac cgataatatc ttccgtttca cgcaagcagg ttctgaagta 720
tctgcccttc ttggccgtat gccatctgcg gtaggttacc aaccaacact tgcaacagaa 780
atgggtcaat tacaagagcg tattacatct acaataa 817

<210> 1258
<211> 829
<212> DNA
<213> *Bacillus thuringiensis* strain HER 1404

<400> 1258
ccagaaatct acaacgccct tacggtaaaa caaagcaacg aaaacggaag tattaactta 60
acatttgaag ttgcacttca tttagggtgat gatacagttc gtacagttgc gatgtcttcc 120
acagatggac ttgttcgtgg cacagaagta gaagatactg gtaaaccaat ctctgtacca 180
gttgggtgatg taacacttgg tcgcgtattt aacgtattag gtgatgcaat tgacttagat 240
ggtgaggttc ctgcagatgt acatcgtgat ccaattcacc gtcaagcacc tgcattcgaa 300
gaattatcta ctaaagtaga aattcttgaa actgggtatta aagtagtaga cttacttgct 360
ccttacatta aggggtggtaa gatcggccta ttcgggtgggt cgggcgtagg taaaacagta 420
ttaattcagg aattaattaa caacatcgca caagagcacg gtggtatctc tgtattcgct 480
gggtgtaggtg agcgtactcg tgagggtaat gacttatacc acgaaatgag cgattctggc 540
gtaatcaaga aaactgcat ggtattcgga caaatgaacg agccacctgg agcacgtcaa 600
cgtgttgcac taacaggttt aacaatggct gagcatttcc gtgatgagca aggacaagac 660
gtacttctgt tcatcgataa catcttccgt ttcacgcaag cgggttctga agtatctgcc 720
cttcttggtc gtatgccatc tgcggtagg taccaccaa cacttgcaac agaaatgggt 780
caattacaag agcgtattac atctacaaat aaagggtcta tcacgtcta 829

<210> 1259
<211> 844
<212> DNA
<213> *Bacillus cereus* ATCC 15816

<400> 1259
tggcggaag ctaccagaaa tctacaacgc ccttacggta aaacagagca acgaaaacgg 60
tgaacttaac ttaacatttg aagttgcact tcatttaggt gatgatacag ttcgtacagt 120
tgcatgtct tccacagatg gacttggtcg tggcacagaa gtagaagata ctggtaaaagc 180
aatctctgta ccagttgggt atgcaacact tggctgcgta tttaacgtat taggtgatgc 240
tattgactta gatggtagg ttccctgcga tgcactcgt gatccaattc accgtcaagc 300
acctgcattc gaagaattat ctactaaagt agaaattctt gaaactggta ttaaagtagt 360
agacttactt gctccttaca ttaaggggtg taagatcggc ctattcgggtg gtgccgggtg 420
aggtaaaaca gtattaattc aggagttaac caacaacatc gcacaagagc acgggtggtat 480
ctctgtattc gctgggttag gtgagcgtag tcgtgagggt aatgacttat accacgaaat 540
gagcgattct ggcgtaatta agaaaactgc gatgggtattc ggacaaatga acgagccacc 600
tggagcacgt caacgtgttg cattaacagc cttacaacatg gctgaatatt tccgtgatga 660

gcaaggacaa gacgtacttc tgttcatcga taatatcttc cgtttcacgc aagcagggttc 720
tgaagtatct gcccttcttg gccgtatgcc atctgcggta ggttaccaac caacacttgc 780
aacagaaatg ggtcaattac aagagcgtat tacatctaca aataaagggc ctatcacgtc 840
tatac

<210> 1260

<211> 840

<212> DNA

<213> *Bacillus cereus* ATCC 49064

<400> 1260

aagctaccag aaatctacaa cgcccttacg gtaaaacaga gcaacgaaaa cggaacaagc 60
attaacttaa catttgaagt tgcacttcat ttaggtgatg acacagttcg tacagttgca 120
atgtcttcca cagatggact tgttcgtggc acagaagtag aagatactgg taaagcaatc 180
tctgtaccag ttggtgatgc aacacttggc cgtgtattta acgtattagg tgatgcaatt 240
gacttagatg gtgaggttcc tgcggatgta cgccgtgata caattcaccg tcaagcacct 300
gcattcgaag aattatctac taaagtagaa attcttgaaa ctggtattaa agtagtagac 360
ttacttgctc cttacattaa ggggtggaag atcgggtctat tccgttggtgc cgggttaggt 420
aaaacagtat taattcagga attaatcaac aacatcgac aagaacacgg tggatctctc 480
gtattcgcgtg gtgtaggtga gcgtactcgt gagggtaatg acttatacca cgaaatgagc 540
gattcaggcg taattaagaa aactgcgatg gtattcggac aaatgaacga gccacctgga 600
gcgcgtcaac gtgttcggtt aacagggtta acaatggctg agcatttccg tgatgagcaa 660
ggacaagacg ttcttctggt catcgataat atcttccgtt tcacgcaagc aggttctgaa 720
gtatctgccc ttcttggtcg tatgccatct gcggtaggtt accaaccaac acttgcaaca 780
gaaatgggtc aattacaaga gcgtattaca tctacaaata aagggtctat cacgtctatc 840

<210> 1261

<211> 839

<212> DNA

<213> *Bacillus thuringiensis* strain BGSC 4AZ1

<400> 1261

gcggaaagct accagaaatc tacaatgccc ttacggtaaa acaaagcaac gaaaacggaa 60
gcatgaactt aacatttgaa gttgcacttc atttaggtga tgatacagtt cgtacagttg 120
cgatgtcttc cacagatgga cttgttcggt gcacagaagt agaagatact ggtaaagcaa 180
tctctgtacc agttggtgat gcaacacttg gacgtgtatt caacgtatta ggtgatgcaa 240
ttgacttaga tggatgaactt cctgcggatg tacaccgtga tccaattcac cgtcaagcac 300
ctgcattcga agaattatct actaaagtag aaattcttga aactgggtatt aaagtagtag 360
acttacttgc tccttacatt aagggtggta agatcgccct attcgggtggg gccggcgtag 420
gtaaaacagt attaattcag gagttaatca ataacatcgc acaagagcac ggtggtatct 480
ctgtattcgc tgggtgtaggt gagcgtactc gtgagggtaa tgacttatac cacgaaatga 540
gcgattctgg cgtaatacaag aaaactgcga tggatattcgg acaaataaac gagccacctg 600
gagcacgtca acgtgttgca ttaacaggtt taacaatggc tgagcatttc cgtgatgagc 660
aaggacaaga cgtactcttg ttcatcgata acatcttccg ttccacgcaa gcgggttctg 720
aagtatctgc ctttcttggg cgtatgccat ctgcggtagg ttaccaacca acacttgcaa 780
cagaaatggg tcaattacaa gagcgtatta catctacaaa taaagggtct atcacgtct 839

<210> 1262

<211> 833

<212> DNA

<213> *Bacillus thuringiensis* strain BGSC 4H2

<400> 1262

aagctaccag aaatctacaa tgcccttacg gtaaaacaaa gcaacgaaaa cggaagcatg 60
aacttaacat ttgaagttgc acttcattta ggtgatgata cagttcgtac agttgcgatg 120
tcttccacag atggacttgt tcgtggcaca gaagtagaag atactggtaa agcaatctct 180
gtaccagtgt gtgatgcaac acttggacgt gtattcaacg tattaggtga tgcaattgac 240
ttagatgggtg aacttctctg ggatgtacac cgtgatccaa ttcaccgtca agcacctgca 300
ttcgaagaat tatctactaa agtagaaatt cttgaaactg gtattaaagt agtagactta 360
cttgctcctt acattaaggg tggtaagatc ggcctattcg gtggtgccgg cgtaggtaaa 420
acagtattaa ttcaggaatt aatcaataac atcgacacaa agcacgggtg tatctctgta 480
ttcgctgggtg taggtgagcg tactcgtgag ggtaatgact tataccacga aatgagcgat 540
tctggcgtaa tcaagaaaac tgcgatggta ttcggacaaa tgaacgagcc acctggagca 600


```
cgatcaacgtg ttgcattaac aggtttaaca atggctgagc atttccgtga tgagcaagga 660
caagacgtac ttctgttcat cgataacatc ttccgtttca cgcaagcggg ttctgaagta 720
tctgcccttc ttggctgtat gccatctgcg gtaggttacc aaccaacact tgcaacagaa 780
atgggtcaat tacaagagcg tattacatct acaaataaag ggtctatcac gtc 833
```

<210> 1263
<211> 790
<212> DNA
<213> *Bacillus thuringiensis* strain BGSC 4Q1

```
<400> 1263
cgaaaacgga agcatgaact taacatttga agttgcactt catttaggtg atgatacagt 60
tcgtacagtt gcgatgtctt ccacagatgg acttggtcgt ggcacagaag tagaagatac 120
tggtaaagca atttctgtac cagttggtga tgtaacactt ggacgtgtat tcaacgtatt 180
aggtgatgca attgacttag atggatgaact tcctgcggat gtacaccgtg atccaattca 240
ccgtcaagca cctgcattcg aagaattatc tactaaagta gaaattcttg aaactggat 300
taaagtagta gacttacttg ctctttacat taagggtggg aagatcggcc tattcgggtg 360
tgccgggtga ggtaaaacag tattaattca ggaattaat aacaacatcg cacaagagca 420
cggtggtatc tctgtattcg ctggtgtagg tgagcgtact cgtgagggtg atgacttata 480
ccacgaaatg agcgattctg gcgtaatcaa gaaaactgcg atggatttcg gacaaatgaa 540
cgagccacct ggagcacgtc aacgtgttgc attaacaggt ttaacaatgg ctgagcattt 600
ccgtgatgag caaggacaag acgtacttct gttcatcgat aacatcttcc gtttcacgca 660
agcgggttct gaagtatctg cccttcttgg tcgtatgcca tctgcggtag gttaccaacc 720
aacacttgca acagaaatgg gtcaattaca agagcgtatt acatctacaa ataaagggtc 780
tatcacgtct 790
```

<210> 1264
<211> 644
<212> DNA
<213> *Bacillus thuringiensis* strain HER 1232

```
<400> 1264
agttgcactt catttaggtg atgatacagt tcgtacagtt gcgatgtctt ccacagatgg 60
acttggtcgt ggcacagaag tagaagatac tggtaaacca atctctgtac cagttggtga 120
tgtaacactt ggctcgcgtat ttaacgtatt aggtgatgca attgacttag atgggtgaggt 180
tctgcagat gtacatcgtg atccaattca ccgtcaagca cctgcattcg aagaattatc 240
tactaaagta gaaattcttg aaactggat taaagtagta gacttacttg ctctttacat 300
taagggtggg aagatcggcc tattcgggtg tgccggcgta ggtaaaacag tattaattca 360
ggaattaat aacaacatcg cacaagagca cggtggtatc tctgtattcg ctggtgtagg 420
tgagcgtact cgtgagggtg atgacttata ccacgaaatg agcgattctg gcgtaatcaa 480
gaaaactgcg atggatttcg gacaaatgaa cgagccacct ggagcacgtc aacgtgttgc 540
attaacaggt ttaacaatgg ctgagcattt ccgtgatgag caaggacaag acgtacttct 600
gttcatcgat aacatcttcc gtttcacgca agcgggttct gaag 644
```

<210> 1265
<211> 823
<212> DNA
<213> *Bacillus anthracis* ATCC 4229

```
<400> 1265
ggcggaaagc taccagaaat ctacaacgcc cttacggtaa aacagagcaa cgaaaacgga 60
acaagcatta acttaacatt tgaagttgca cttcatttag gtgatgacac agttcgtaca 120
ggttgcaatgt cttccacaga tggacttggt cgtggcacag aagtagaaga tactggtaaa 180
gcaattctctg taccagttgg tgatgcaaca cttggtcgtg tatttaacgt attaggtgat 240
gcaattgact tagatggtga ggttcctgcg gatgtacgtc gtgatccaat tcaccgtcaa 300
gcacctgcat tcgaagaatt atctactaaa gtagaaattc ttgaaactgg tattaagta 360
gtagacttac ttgctcctta cattaagggt ggtaagatcg gtctattcgg tgggtgccgg 420
gtaggtaaaa cggattaat tcaggaatta atcaataaca tcgcacaaga acacgggtgg 480
atctctgtat tcgctggtgt aggtgagcgt actcgtgagg gtaatgactt ataccacgaa 540
atgagcgatt ctggcgtaat taagaaaaact gcgatgggat tcggacaaat gaacgagcca 600
cctggagcac gtcaacgtgt tgcgttaaca ggtttaacaa tggctgagca ttccgtgat 660
gagcaaggac aagatgtact tctgttcatc gataatatct tccgtttcac gcaagcaggt 720
tctgaagtat ctgcccttct tggccgtatg ccatctgcg taggttacca accaacact 780
```

gcaacagaaa tgggtcaatt acaagagcgt attacatcta caa

823

<210> 1266
<211> 715
<212> DNA
<213> Paracoccidioides brasiliensis ATCC 200443

<400> 1266						
tgggtccgagr	cccgattcma	tgaaattatc	aaggaaacct	ccaayttcat	taagaagggtc	60
ggatataaacc	ccaagactgt	tcctttcgtt	cccattttctg	gtttccaggg	tgacaacatg	120
atcgatscct	ctgccaactg	cccatgggtac	aagggctggt	acmakgagac	tgccgacagg	180
caagyactct	ggcaagaccc	ttcttgaggc	cattgacgsc	attgagcccc	ccamscgctc	240
twccgataaa	cctctccgtc	ttcctctcca	ggatgtctac	aagatctccg	gtattggmac	300
tgttcctgtc	ggacgtrttg	agactggagt	catcaagccc	ggtatgggtc	tgaccttcgc	360
tcccgccaac	gtcaccactg	aagtcaagtc	cgttgaaatg	caccaccagc	agctttccga	420
cggtaawcccc	ggtgacaacg	tcggcttcaa	cgtcaagaat	gtttccgtca	aagaagtcgc	480
ccgtggtaac	gttgccctggt	gactctaaga	atgatcccgc	mawgggctgc	gattccttca	540
atgcycaggt	catcgtcctc	aaccaccctg	gtcagggttg	cgtcgggtat	gccccagtc	600
tcgaytgcca	tactgcccac	attgcytgca	arttcgctga	gmtcmakgag	aagattgayc	660
gccgaaccgg	maagtctgtt	gagaacgccc	ccaagttcat	caagtccggt	gatgc	715

<210> 1267
<211> 875
<212> DNA
<213> Blastomyces dermatitidis ATCC 56220

<400> 1267						
gagtcctctt	atcttactttt	gtcatgacta	ccttactaat	ctgtcataga	tcgttacaac	60
gaaatcgctca	aggagacttc	caacttcata	aagaaggctc	gatacaaccc	caagaacggt	120
cctttcgttc	ctatctccgg	tttcaacggc	gacaacatgc	ttgagccctc	ccccactgc	180
ccctgggtaca	aggggttgga	gaaggagacc	aaggccggta	aggtcactgg	taagaccctc	240
ctcgaggcca	tcgacgccat	tgagccccct	acccgtccc	ccaacaaggt	cagtactacc	300
tcaattactt	gaactctctt	catacgttcc	gattactgac	tgcttcacag	cccctccgtc	360
ttccccctcca	ggacgtttac	aagatcggtg	gtattggaac	ggtgcccgtc	ggtcgtgttg	420
agaccgggtac	catctcccc	ggtatggtcg	ttaccttgta	tgtatcctga	ccatccccct	480
tggcaatcat	tacgtactaa	ctcactcttc	agcgctccc	ccaacgtcac	cactgaagtc	540
aagagtgttg	aaatgcacca	ccagcagctc	gctgcccgtc	agcccgggtg	caacgttggt	600
ttcaacgtga	agaacgtctc	cgtcaaggaa	atccgtcgtg	gtaacgttgc	tggtgatagc	660
aagaacgacc	cccctgccgg	tgctgcttcc	ttcaacgccc	aggtcatcgt	cctcaaccac	720
cccggtcagg	tcgggtgctg	ttacgcccc	gtccttgact	gccacactgc	ccacattgct	780
tgcaagttct	ctgaactcct	tgagaagatt	gaccgtcgta	ccggaaagtc	tgttgaggac	840
caccccaagt	tcatacaagtc	cggtgacgct	gccat			875

<210> 1268
<211> 1124
<212> DNA
<213> Histoplasma capsulatum strain WSA-377

<400> 1268						
gtgagcgtgg	tatcaccatc	gatattgccc	tctggaaatt	cgagaccccc	aagtacagtg	60
tcactgtcat	tggtgagtg	tttttacc	tcttaagcag	atttcaactt	ccagagtatc	120
tactctaaca	tatccgctta	gatgctccc	gccatcgta	cttcatcaag	aacatgatca	180
ctgggtacctc	ccaggctgac	tgcgctatcc	tcatcattgc	tgccgggtact	ggtgagttcg	240
aggctgggtat	ctccaaggat	ggccagactc	gtgagcacgc	tctgcttgct	ttcacccttg	300
gtgtgaggca	actcatcggt	gccatcaaca	agatgggacac	caccaagtg	tccgagtc	360
gtttcaacga	aatcatcaag	gaggtttcca	acttcatcaa	gaaggctcga	tataaccca	420
aggetgtttcc	cttcgtgcca	atctctgggt	tcgagggtga	caacatgatt	gaacctctcc	480
ccaaactgcac	ctgggtacaag	ggctggaaca	aggagactgc	ctctggcaag	tcttctggta	540
aaacctttct	cgatgccatt	gacgccattg	aacccccaac	ccgtcctacc	gataagcctc	600
tccgtcttcc	cctccaggat	gtttacaaaa	tctctgggtat	tggtcactgtt	cccgtcggac	660
gtgttgagac	tggtgtcatc	aagcccggta	tggtcgtgac	tttcgctccc	tccaacgtca	720
ccactgaagt	caagtccgtc	gagatgcacc	aaccaaac	ccaggctgg	taccttggtg	780
acaacgtcgg	cttcaacgtc	aagaacgttt	cagtcaagg	agtccgccc	ggcaacgttg	840

```
ctggcgactc caaaaatgat cccccaaggg gctgcgaatc cttcaatgcc caggtcatcg 900
tccttaacca ccccgccag gttggcgctg gttatgcccc agtcctcgac tgccacactg 960
cccacattgc ttgcaagttc tctgaactca ttgagaagat cgaccgccgt actggaaagt 1020
ctgttgagaa caacccaag ttcataagtt ctggtgatgc tgctatcgtc aagatggttc 1080
cctccaagcc catgtgcgtg gagcccttca ctgactatcc ccct 1124
```

<210> 1269
<211> 1043
<212> DNA
<213> *Trichophyton rubrum* strain WSA-224

<220>
<221> misc_feature
<222> (693)..(693)
<223> n represents any nucleotide

```
<400> 1269
gtgagcgtgg tatcaccatc gatatcgccc tctggaagtt cgagaccccc aagtacaatg 60
tcaccgtcat tggatatgtt ctttgccttg ttccctcatg tggttgtacc atatctaacg 120
agagtagacg ccccggttca ccgtgacttc atcaagaaca tgatcactgg tacctcccag 180
gctgactgcg ctattctcat cattgctgcc ggtactgggtg agttcgaggc tggatatctc 240
aaggatggcc agaccctga gcacgctctg ctgcgcttca cctcggtgt caagcagctc 300
atcggtgcca tcaacaagat ggacaccacc ggctgggtccg aggatcgttt caaggaaatt 360
atcaaggaag tcaccaactt catcaagaag gttgggtacg accccaaggg tgttccattc 420
gttccaatct ctggtttcaa cgggtgacaac atgattgagg cctccaccaaa ctgcccattg 480
tacaagggat ggaacaagga gaccaaggcc ggtgggtgcca agtcgggcaa gacctcctc 540
gaggecatcg atgccatcga catgccaaacc cgtcctaccg acaagcccct ccgtctccca 600
ctccaggatg tctacaagat ctctgggtatc ggaactgtgc cagtcgggtcg tgttgagacc 660
ggtatcatca agcccggat ggtcgtcacc ttngcccccg ccaacgtcac cactgaagtc 720
aagtcgctyk aaatgcacca ccagcagctt cagcaggggtg tccccgggtga caacgtcggc 780
ttcaatgtca agaacgtttc cgtcaaggaa gtccgcccgtg gtaacgttgc cggtgactcc 840
aagaacgacc caccatccgg ctgtgcctcc ttcaacgccc aggtcatygt cctcaaccac 900
cccggccaga tcgggtgctgg ttacgstcca gtccctcgact gccacactgs tcacattgct 960
tgcaagttcg ctgagctcct cgagaagatt gaccgcccgt cgggtaaatc cgtcgaagcc 1020
aaccccaagt tcgtcaagtc tgg 1043
```

<210> 1270
<211> 1105
<212> DNA
<213> *Microsporum canis* strain WSA-217

```
<400> 1270
gctgagcgtg agcgtggtat caccattgat atcgccctct ggaagttcga gacccccaaag 60
tacatgggtca ccgtcatcgg tatgctttat ctgtttccca tttatagttg cgaccagtaa 120
ctaacaaaaa gtagatgccc ccgggcaccg tgacttcatc aagaacatga ttactgggtac 180
ctcccaggcc gactgcgcta ttctcatcat tgctgcccgt actggtgagt tcgaggctgg 240
tatctccaag gatggccaga ctctgtagca cgccctgctc gctttcacc tcggtgtcaa 300
gcagctcatc gttgccatca acaagatgga caccaccaac tgggtctgagt cccgtttcgg 360
tgaaatcatc aaggaagtca ccaacttcat caagaaggtc ggctacgacc ccaagggtgt 420
cccattcgtc ccaatctctg gcttcaacgg tgacaacatg attgagccct ccaccaactg 480
cccatgggtac aagggtatgga acaaggagac caaggccggg ggcaaatacct ctggtaaagac 540
cctccttgag gccatcgatg ccattgacat gccactcgt cccaccgaca agcctctccg 600
tctcccactc caggatgtct acaagatctc tgggtatcgga acagtaccag tcggtcgtgt 660
tgagactggt atcatcaagc ctgggtatgg ttgactttty gcccccgcca acgtcaccac 720
tgaagtcaag tccgtcgaaa tgcaccacca gcagctygtc cagggtgttc ccggtgacaa 780
cgttggcttc aacgtcaaga acgtytctgt caaggaagtc cgccgtggta acgttgccgg 840
tgattccaag aacgacccac cagctggctg ccctctttc aaggcccagg tcactcgtcct 900
caaccacccc ggccagatcg gtgctgggta cgccccagtc cttgactgcc aactgcccc 960
cattgcttgc aagttctctg agcttcttga gaagattgac cgccgtactg gtaaatccgt 1020
cgaaaccagc cctaagttcg tcaagctcgt tgatgccgct attgccacca tggttccatc 1080
caagcccattg tgcgttgagg ctttc 1105
```

<210> 1271
 <211> 1244
 <212> DNA
 <213> *Aspergillus versicolor* strain WSA-175

```

<400> 1271
gagcgtgagc gtgggtatcac catcgatata gctctctgga agttccagac ccctaagtat 60
gaggtcaccg tcattggtat gttgtccttc ttgtgttacc atcgaaacat atctaacctt 120
caactgcaga cgccccgggt caccgtgact tcatcaagaa catgatcact ggtacctccc 180
aggccgactg cgctattctc atcattgctt ccggtactgg tgaattcgag gctgggtatct 240
ccaaggatgg ccagacccgt gagcacgctc tgctcgcttt caccctcggt gtccgtcagc 300
tcatcgttgc cctcaacaag atggacactg ctgggtgggc tgaggctcgt tacaacgaaa 360
tcgtcaagga aacttccggg ttcatcaaga aggtcggcta caacccaag tcggttccct 420
tcgtcccat ctccggtttc aacggtgaca acatgcttga gccctcctcc aactgcccct 480
ggtacaaggg ttgggagaag gagaccaagg ctggtaaggc cactggtaag accctcctcg 540
aggccatcga cgccattgag cctcccgtcc gtcccctcaa caagcctctc cgtcttcccc 600
tccaggatgt ctacaagatc tctgggtatt gaactgtccc cgtcggccgt gtcgagaccg 660
gtaccatcgt ccccggtatg gtcgtcacct tcgctccgc caacgtcacc actgaagtca 720
agtccggttg gatgcaccac cagcagctca aggagggtgt tcccggtkac aacggtgggt 780
tcaacgtgaa gaacgtttcc gtcaaggaag tccgccgtgg taacgtcgct ggtgactcca 840
agaacgaccc ccctgccggt gctgcctctt tcaccgccc ggtcatcgtc ctcaaccacc 900
ccggtcagggt cggcgctggg tacgctcccg tccctcgact ccacaccgt cacattgcct 960
gcaagttcgc tgagctccag gagaagatcg accgccgtac cggaaagtct gtcgaatytg 1020
cccccaagtt catcaagtct ggtgacgcgc ctatcgtcaa gatgattccc tccaagccca 1080
tgtgtgtcga gtcttttact gactaccctc ctytcggccg ttccgcccgt cgtgacgtaa 1140
gttctttccc cagcttttctg atgctaccct tctmtgaatc acgtgtcatg tcttggcacc 1200
cgcccatcac atgaccacgc aacctatata cccgccacac cctt 1244
  
```

<210> 1272
 <211> 1032
 <212> DNA
 <213> *Exophiala moniliae* strain WSA-219

```

<400> 1272
gctgagcgtg agcgtgggtat caccatcgat atcgctctctt ggaagttcga gaccccccaag 60
tactatgtca ccgtcatcga cgccccgggt catcgtgact tcatcaagaa catgatcact 120
ggtacttccc aagctgactg cgccattctc atcattgctg ccggtactgg tgaattcgaa 180
gccggtatct ccaaggatgg tcagacccgt gagcacgctc tgcttgccca caccctgggt 240
gtcaagcagc tcattgtcgc catcaacaag atggacacta ccaagtgggc tgaggaccgt 300
ttcaacgaaa tcatcaagga gacttccagc ttcataaga aggtcggcta caacccaag 360
tcggttccct tcgtcccat ctccggcttc aacggtgaca acatgatcga cgtctccacc 420
aactgcccct ggtacaaggg ctgggagaag gagaccaagg ctggcaaggc ctctggcaag 480
actctccttg aggccatcga cgccattgac cccccctctc gtcccaccga caagcctytc 540
cgtctccctc tccaggatgt gtacaagatc tctgggtatg gaacggtgcc cgtcggtcgt 600
gtcgagactg gtatcatcaa ggccggtatg tctgttacct tcgctcctgc caacgtcacc 660
actgaagtca agtccgtcga aatgcaccac gaacagctcg ccgagggtgt tccagggtgac 720
aacgtcggtt tcaacgtcaa gaacgtytcc gtcaaggagg ttcgtcgctg aaacgtttgc 780
ggtgactcca agaacgaccc acccaagggc gctgattcct tcaacgccc ggtcatcgtc 840
ttgaaccacc ctggtcaagt tgggtgctggc tacgccccag tggtggattg ccacactgcc 900
cacattgctt gcaagttctc tgagcttctc gagaagatcg atcgtcgkac cggaaagtgc 960
atcgaaaaca accccaagtt catcaagtct ggtgacgctg ccacgtcaa gatgggtccc 1020
agcaagccca tg 1032
  
```

<210> 1273
 <211> 1106
 <212> DNA
 <213> *Hortaea werneckii* ATCC 34944

```

<400> 1273
taacagcccc tgcgaccgtc tcgtccaata actaatgatt cgcagggtact atgtcgtgag 60
tatccgggtcc ttttttggtta atttaccaga taatgacgaaa tttttgacta attaacacac 120
tcagaccgtc attgacgccc cgggtcaccg tgacttcatc aagaacatga tcaactggtac 180
ctcccaggcc gactgcgctg tctcatcat tgctgccggt actggtgagt tcgaggctgg 240
tatctccaag gatggccaga cccgtgagca cgccctgctc gcctacacc tcggtgtcaa 300
  
```

gcagctcatc	gtcgccatca	ataagatgga	caccaccaag	tgggtccgagg	agcggttacgg	360
cgagatcatc	aaggagacct	ctgccttcat	caagaagggtc	ggttttcaacc	cgaagcacgt	420
cccgttcgtc	cggatctccg	gtttcaacgg	tgacaacatg	atcgaggcct	ycaccaactg	480
cccgttggtac	aagggctggg	agaaggagac	caaggccaag	gtcaccggca	agaccctyct	540
tgaggccatt	gacaacatcg	acccgccgag	ccgtccttcc	gacaagccgc	tccgtcttcc	600
cctccaggat	gtctacaaga	tgggtggtat	tgggacagtc	ccagtcggcc	gtgtcgagac	660
cggtaccatc	aaggccggca	tggtcgttac	cttcgctccg	gctggtgtca	ccactgaagt	720
gaagtccgtt	garatgcacc	acgagcagct	cgctgagggt	ytgccgggtg	acaacgtcgg	780
cttcaacgtc	aagaacgttt	ccgtcaagga	gatccgtcgt	ggcaacgttg	ctgggtgacag	840
caaggctgac	ccgccgaagg	gctgcgacag	cttcaacgcc	caggtcatcg	tcctgaacca	900
ccctggccag	gtcgggtgctg	gttacgctcc	agtcctggac	tgccacactg	cccacattgc	960
ctgcaagttc	ggcgagctcc	tcgagaagat	cgaccgtcgc	tytggaagat	ccattgaagc	1020
ctygcctaag	tacatcaagt	ctggtgacgc	tgccatygtc	aagatgattc	cgtccaagcc	1080
gatgtgcgtt	gagccattca	ctgagt				1106

<210> 1274

<211> 1119

<212> DNA

<213> *Fusarium solani* ATCC 32793

<400> 1274

ctcaaggccg	agcgtgagcg	tggatcacc	atcgacattg	ccctctggaa	gttcgagact	60
ccccgctact	atgtcacctg	cattgggtatg	ttgctgtcac	ctctctcaca	catgtctcac	120
cactaacaat	caacagacgc	ccccggccac	cgtgatttca	tcaagaacat	gatcactggt	180
acttcccagg	ccgactgcgc	cattctcatc	attgccgcgc	gtactggtga	gttcgaggct	240
ggtatctcca	aggatggcca	gaccctgtag	cacgccctgc	tcgctacac	cctcggtgtc	300
aagaacctca	ttgtcgccat	caacaagatg	gacaccacca	agtgggtccga	gtcccgttac	360
caggagatca	tcaaggagac	ctccaacttc	atcaagaagg	tcggctacaa	ccccaggct	420
gtcgctttcg	tccccatctc	cggtttcaac	ggcgacaaca	tgcttactcc	ctccaccaac	480
tgcccctggt	acaagggtcg	ggagcgtgag	atcaagtcgc	gcaagctcac	tggcaagacc	540
ctcctcgagg	ccattgactc	catcgagccc	ccaaagcgtc	ccgtcgacaa	gcccctycga	600
cttcccctcc	aggatgtcta	caagatcggt	ggtattggca	cggttcccgt	cggccgtatc	660
gagactggtg	tcatcaagcc	cggatatggtc	gttaccttmg	ccccctccaa	cgtcaccact	720
gaagtcaagt	ccgtcgarat	gcaccacgag	cagctctytg	agggctcttc	cggtgacaac	780
gtcggcttca	acgtgaagaa	cgtytccgtc	aaggagatcc	gacgtggcaa	cgtcgctggt	840
gactccaaga	acgaccccc	tytgggtgcc	gcctctttca	ccgccagggt	cattgtcttc	900
aaccaccctg	gccaggctcg	tgcgggttac	gcccccgatty	tggactgcc	cactgcccac	960
attgcctgca	agttcgccga	gatccaggag	aagatcgacc	gccgaactgg	taaggctggt	1020
gagtcgcgcc	ccaagttcat	caagtctggt	gactccgcc	tcgtcaagat	ggttccctcc	1080
aagcccatgt	gcgttgaggc	tttcaactgac	tacccccct			1119

<210> 1275

<211> 1113

<212> DNA

<213> *Aureobasidium pullulans* strain WSA-234

<400> 1275

ctgaagtctg	agcgtgagcg	tggatcact	atcgatatcg	ccctctggaa	gttcgagacc	60
cccaagtaca	tggtcaccgt	catcgatgcc	cccggtcacc	gtgatttcat	caagaacatg	120
atcactggta	cctcccaggc	tgactgcgcc	attctcatca	ttgctgccgg	tactggtgag	180
ttcgaggctg	gtatctccaa	ggatggccag	actcgtgagc	acgctctcct	cgcctacacc	240
cttgggtgtca	agcagctcat	cgttgccatc	aacaagatgg	acaccaccaa	gtggtctgag	300
gcccgttacc	aggagatcat	caaggagacc	tccggtttca	tcaagaagggt	cgggtacaa	360
cccaagcacg	ttcccttctg	ccccatctcc	ggcttcaacg	gagacaacat	gatcgagggtc	420
agctccaact	gcccttggtg	caagggttgg	gagaaggaga	ccaaggccaa	ggccactggc	480
aagaccctcc	tcgaggccat	tgacgccatc	gacctctcct	cccgctctac	cgacaagccc	540
ctccgtcttc	ccctccagga	tgtctacaag	atcggtggta	ttggcacggg	gcccgtcggt	600
cgtgttgaga	ccggttaagt	catgggtggt	atggttgc	ccttcgcccc	cgtggtgtc	660
accaccgagg	tcaagtccgt	cgagatgcac	cacgagcagc	tcaccgaggg	tcttcccgtg	720
gacaacgtcg	gcttcaacgt	caagaacgty	tccgtcaagg	agatccgtcg	tggcaacggt	780
gccggtgact	ccaagaacga	cccccccaag	gggttggtg	ccttcaacgc	ccaggctcgt	840
gtcctgaacc	accctgggtc	ggtcgggtgc	ggttacgcac	ccgtcctcga	gtgccacact	900
gccacattg	cttgcaagtt	ytccgagctt	ggttgagaaga	ttgaccgcag	aaccggcaag	960
tccgttgagg	ctgcccccaa	gttcatcaag	tctggtgacg	ccgccatcgt	caagatggtt	1020

ccctccaagc ccatgtgtgt tgagggtttc accgactacc ctccctytcgg tcgtttcgcc 1080
gtccggtatg tttttcttct tcaatcattc ttc 1113

<210> 1276
<211> 731
<212> DNA
<213> *Blastomyces dermatitidis* ATCC 14112

<400> 1276
ggtctgagac ccgtttcaac gaaattatca aggaagtcag caacttcac aagaaggctcg 60
gatacaaccc caagtctgtt cccttcgtgc caatctccgg tttcgagggt gacaacatga 120
ttgagccttc ccccaactgc ccttggtaca agggctggaa caaggagact gctgctggca 180
aggccgcccgg taagactctt ctcgatgcc ttgacgccat cgaccccccc gtccgtccta 240
ccgagaagcc tctccgtctt cccctccagg atgtgtacaa gatctccggg attggcactg 300
ttcccgttgg acgtgtcgag actggtgtca tcaagcctgg tatggctcgtg accttcgccc 360
ctgccaacgt caccactgaa gtcaagtccg ttgaaatgca ccaccagcag ctccaggctg 420
gttaccctgg tgacaacgtc ggcttcaacg tcaagaacgt ttccgtcaag gaagtccgcc 480
gtggcaacgt tgccggtgac tccaagaacg acccccccaa gggctgcgag tccttcaacg 540
cccaggtcat cgctctcaac cccccggcc aggttggcgc tggttatgcc ccagtcctcg 600
actgccacac tgcccacatt gcttgcaagt tctctgagct catcgagaag attgaccgcc 660
gtaccgaaa gtctgttgag gacaaccca agttcatcaa gtccggtgat gctgctatcg 720
tcaagatgat t 731

<210> 1277
<211> 1046
<212> DNA
<213> *Exophiala dermatitidis* ATCC 76088

<400> 1277
ccgagcgtga gcgtggtatc accatcgata tcgccctctg gaagttcgag acccccaagt 60
actatgtcac cgtcatcgac gccccgggtc atcgtgactt tatcaagaac atgatcactg 120
gtacctcgca ggccgactgc gccatcttga tcattgccgc cggtagccgt gaattcgaag 180
ccggtatctc caaggatggg cagacccgtg agcacgctct gctcgccctac accttgggtg 240
tcaagcagct catcgtcgcc atcaacaaga tggacaccac caagtgggtc gaggagcgtt 300
tcaacgaaa catcaaggag acttccaact tcataagaa ggtcggctac aaccccaagg 360
ccgttccttt cgtccccatc tccggcttca acggtgacaa catgattgag gtctccacca 420
actgcccgtg gtacaaggga tgggagaagg agtccaaggc tggcaaggcc accggcaaga 480
ccctcctcga ggccattgac gccatcgacc caccacccg tcccaccgac aagcctctcc 540
gtctccctct ccaggatgtc tacaagatct ctggtatcgg tcgtcacctt cgctccggcc aacgtcacca 600
ctgagaccgg taccatcaag gccggtatgg tcgtacactt cgtcgggtc caggtgaca 720
ctgaagtcaa gtccgtcgaa atgcaccacg agcagctcgc cgagggtgtg ccaggtgaca 780
acgttggctt caacgtcaag aacgtytccg tcaaggaggt tcgtcgtggg aacgttgccc 840
gtgactccaa gaacgacccg cccaaggggt cagatcctt caacgcccag gtcattgtcc 900
tcaaccaccc tggtcagatc ggtgccggtc agctccagt cttggattgc cacactgccc 960
acattgcttg caagttcgcc gagttgctcg agaagatcga ccgtcgtacc ggaaagtcca 1020
tcgagaacaa cccaagttc atcaagtctg gtgatgctgc catcgtcaag atgattccca 1046
gcaagcccat gtgtgtcgag gctttc

<210> 1278
<211> 1109
<212> DNA
<213> *Fusarium moniliforme* strain WSA-213

<400> 1278
cgtgagcgtg gtatcaccat cgatattgct ctctggaagt tcgagactcc tcgctactat 60
gtcaccgtca ttggtatgtt gtcgctcata cctcatccta ctaacacatc 120
attcagacgc tcccggtcac cgtgatttca tcaagaacat gatcactggg acttcccagg 180
ccgattgcgc cattctcatc attgccgccc gtactgggtg gttcgagggt ggtatctcca 240
aggatggcca gacccgtgag cacgctcttc ttgcctacac ccttgggtgc aagaacctca 300
tcgtcgccat caacaagatg gacaccacca agtgggtctg ggcccgttac caggagatca 360
tcaaggagac ctctcttttc atcaagaagg tcggctacaa cccaagggt gtcgctttcg 420
tcccctctc cggtttcaac ggtgacaaca tgcttaccac ctccaccaac tgcccctggg 480
acaaggggtg ggagcgtgag atcaagtccg gcaagctctc cggcaagacc ctctctgagg 540

ccattgactc	catcgagcct	cccaagcgtc	cggttgacaa	gcccctccgt	cttccccctcc	600
aggatgtcta	caagatcggt	ggtattggaa	cggttcccgt	cggccgtatt	gagactgggtg	660
tcatcaagcc	cggtatggtc	gttaccttcg	ctccctccaa	cgtcaccact	gaagtcaagt	720
ccgtcgarat	gcaccacgag	cagytcagtk	agggccagcc	cggtgacaac	gttgggtttca	780
acgtgaagaa	cgtttccgtc	aaggacatcc	gacgtggtaa	cgctcgctggt	gactccaaga	840
acgaccccc	ccagggtgcc	gcttctttca	ccgcccaggt	catcgtcctc	aaccacccccg	900
gccaggtcgg	tgctgggttac	gctcctgtcc	tcgattgcc	caactgcccac	attgacctgca	960
agttcgccga	gatccaggag	aagatcgacc	gccgaaccgg	taaggctact	gaggccgctc	1020
ccaagttcat	caagtctggg	gactccgcca	tcgtcaagat	ggttccccctc	aagcccatgt	1080
gtgtcgaggg	tttcaactgac	taccctcct				1109

<210> 1279
 <211> 765
 <212> DNA
 <213> *Aspergillus terreus* strain WSA-174

<400> 1279						
cctgcaagtg	gtctgaggac	cgttacaacg	aaatcgtgaa	ggagacctcc	aacttcatca	60
agaaggctcg	ctacaacccc	aaggccgttc	ccttcgtccc	catctccggt	ttcaacgggtg	120
acaacatgct	tgagccttcc	cccaactgcc	cctgggtacaa	gggttggggag	aaggaggggca	180
agtccggcaa	ggtcaccggt	aagactctcc	tcgaggccat	cgatgccatc	gagcccccccg	240
tccgtcctgc	caacaagcct	ctccgtcttc	ccctccagga	tgtgtacaag	atctctggta	300
tcggaactgt	ccccgtcggc	cgtgtcgaga	ctgggtgtcat	cacccccggc	atgggtgtta	360
ccttcgctcc	ttccaacgtc	accactgaag	tgaagtccgt	tgagatgcac	caccagcagc	420
tcaaggaggg	tctccccggt	gacaacgttg	gtttcaacgt	caagaacgtc	tccgtcaagg	480
aggtccgtcg	tggtaacgtc	gctgggtgact	ccaagaacga	ccccctgct	ggcgctgcct	540
ccttcaccgc	ccaggtcatc	gttctcaacc	accccggtca	ggtcggcgct	ggctacgccc	600
ccgtcctcga	ctgccacact	gcccacattg	cctgcaagtt	cgctgagctc	caggagaaga	660
ttgaccgccc	taccggaaag	tctgttgagt	cttctcccaa	gttcatcaag	tctgggtgatg	720
ctgccatcgt	caagatgata	cctycaaagc	ccatgtgcgt	cgaag		765

<210> 1280
 <211> 1105
 <212> DNA
 <213> *Aspergillus fumigatus* ATCC 64746

<400> 1280						
gcgtgggtatc	accatcgaca	ttgccctctg	gaagttccag	actcccaagt	atgagggtcac	60
tgatcatcggt	aagctcgact	cgccccgata	tgttttgggtg	ctgtagctaa	cacgatctga	120
agatgcccc	ggtcaccgtg	acttcatcaa	gaacatgata	actgggtacct	cccagggtga	180
ctgcgctatc	ctcatcattg	cctccgggtac	tggtgagttc	gaggctggta	tctccaagga	240
tggtccagacc	cgtgagcacg	ctctgctggc	tttcaccctc	ggtgtcaagc	agctcatcgt	300
cgccctcaac	aagatggaca	cctgcaagtg	gtccgaggat	cgttacaacg	aaattgtcaa	360
ggaaacctcc	aacttcatca	agaaggtcgg	ctacaacccc	aaggccgttc	ccttcgtmcc	420
catckctggc	ttcaacgggtg	acaacatgct	tgagccctcc	tccaactgcc	cctgggtacaa	480
gggatggggag	aaggagacca	aggccggcaa	ggtcactggg	aagaccctca	tcgaggccat	540
ygacgccatt	gagccccctg	tccgtccctc	caacaagccc	ctycgtcttc	ccctccagga	600
tgtytacaag	atctctggta	tcggaacggg	ccctgtcggc	cgtgtcgaga	ccgggtatcat	660
caagcccggc	atggctcgtca	cctttgcccc	cgccaacgtc	accactgaag	tcaagtccgt	720
cgaaatgcac	caccagcagc	tccaggaggg	tgtccccggg	gacaacgtcg	gtttcaacgt	780
caagaacggt	tccgtcaagg	aagtccscgg	tggtaacgtt	tgcggtgact	ccaagaacga	840
tccccctcag	ggtgctgcct	ccttcaacgc	ccaggtcatc	gtcctcaacc	accccggtca	900
ggtcggcgct	ggttacgccc	ccgtcctcga	ctgccacact	gcccacattg	cttgcaagtt	960
ctytgagctg	cttgagaaga	ttgaccgccc	taccggcaag	tctgttgaga	acaaccccaa	1020
gttcatcaag	tccgggtgawg	ccgccatcgt	gaagatgggt	ccttccaagc	ccatgtgtgt	1080
cgagtccttc	actgactacc	ccctc				1105

<210> 1281
 <211> 1343
 <212> DNA
 <213> *Cryptococcus laurentii* ATCC 44096

<400> 1281

```

gccgagcgag agcgaggtat caccategac attgctctct ggaagttcga gacccccaa 60
tacaacgtca ccgctcattga cgcccccgga caccgagact tcatcaagaa catgatcacc 120
ggtacctccc agggcgactg cgccatcctt atcattgcca ccggtatcgg agagttcgag 180
gccggtatct ctaaggacgg tcagacccga gagcacgctt tgctcgctt caccctcgg 240
gtcaggcagc tcatcgttgc ttgcaacaag atggacacct gcaagtggtc cgaggaccga 300
ttcaacgaga tcgtcaagga gaccaacggg ttcataaga aggtcggata caacccccaa 360
gctgttccct tcgtcccat ctctggatgg cacggagaca agtgagtggc gttcttttgc 420
ttgagccctc tttgtcgctc cccctccctc tcaagtggcg gcggcggtct ccaccacaa 480
atcgggtggc gaatccgcca cccccaccac tctcggccac cgagtgtggc acttcttcca 540
actcctcttt ccactcctcc tcgtctcgct tctttttttc tccgttgtct ttgacaagg 600
gagtgtgctg atagtaaagc atgcttgagg agaccacaa catgccgtgg tacaagggat 660
ggaccaagga gaccaagtcc ggtgtcggtt agggtaagac cctcctcgac gccatcgacg 720
ccatcgagcc tcctcaacga cccaccgaca agccccctcg acttccccct caggatgtct 780
acaagatcgg tggtatcggg acgggtgccc tgacggctgt tgttgccaca cccaacttat atccagtatg 840
ccgggtaagt cacgggagcc tgacggctgt tgttgccaca cccaacttat atccagtatg 900
gtcgtcacct tcgtccttac caacgtcacc actgaggtta agtccgttga gatgcaccac 960
gagcagatcc ctgagggtct tcccggagac aacgttggtt tcaacgtgaa gaacgtttcc 1020
atcaaggaca tccgacgagg aaacgtytgc tccgactcca agaacgaccc cgctaaggag 1080
gccgcttctt tcaacgcccc ggtcattgtc ctcaaccacc ctggacagat tgggtgccgg 1140
tacacccccg tcctcgactg ccacaccgcc cacattgcct gcaagttcgc cgagctcatc 1200
gagaagatcg accgacgaac tggttaagacc atggaggccg cccccaagtt cgtcaagtcc 1260
ggagacgccc ccattgtcaa gctcgttgcc cagaagcccc tctgtgtcga gtcttactct 1320
gactaccctc cccttgagac att

```

<210> 1282
 <211> 734
 <212> DNA
 <213> *Emmonsia parva* ATCC 10784

```

<400> 1282
tggtccgagg ctcgtttcaa cgaaatcatc aaggaagtca ccaacttcat caagaaggtc 60
ggatacaacc ccaagtctgt tcccttcgtg ccaatctctg gtttcgaggg tgataacatg 120
attgagccct ccaccaactg cccctggtag aagggtctga ccaaggagac cgctgccggc 180
aagtcaaccg gtaagactct tcttgacgcc attgatgcca tcgatcaacc ctcccgctct 240
accgacaagc cctcctgtct tccccctcag gatgtgtaca agatctccgg tattggcact 300
gttccccgtt gagtggttga gactggatc atcaagcctg gtcgaaatgc accaccaaca gctcttggt 420
ccttccaacg tcaccactga agtcaagtcc gtcgaaatgc accaccaaca gctcttggt 480
ggtaaccccc gtgacaacgt cggtttcaac gtcaagaacg tttccgtcaa ggaagtccgc 540
cgtggcaacg ttgctgggtg ctcaaaagac gaccccccca agggctgcga ctccttcaac 600
gcccaggcca tcgtcctcaa tcaccccggt caagttggcg ctggttatgc cccagtcctc 660
gactgccaca ctgcccacat tgcttgcaag ttctctgagc tcctcgagaa gattgaccgc 720
cgtaccggaa agtccactga gaacaacccc aagttcatca agtctgggtg cgcgcgtatc 780
gtcaagatgg ttcc

```

<210> 1283
 <211> 1107
 <212> DNA
 <213> *Fusarium solani* ATCC 62877

```

<400> 1283
cgtgagcgtg gtatcaccat cgacattgac ctctggaagt tcgagactcc ccgtactat 60
gtcaccgtca ttggtatgtt gctgtcact ctctcacaca tgtctcacca ctaacaatca 120
acagacgccc ccggccaccg tgacttcatc aagaacatga tcaactggtag ttcccaggcc 180
gactgcgcca ttctcatcat tgccgctggt actggtgagt tcgaggctgg tatctccaag 240
gatggccaga cccgtgagca cgccctgctc gcctacaccc tcggtgtcaa gaacctcatt 300
gtcgccatca acaagatgga caccaccaag tgggtccgag cccgttacca ggagatcatc 360
aaggagacct ccaacttcat caagaagggt ggctacaacc ccaaggctgt cgctttcgtc 420
cccatctcgg gtttcaacgg cgacaacatg ctactccct ccaccaactg cccctggtag 480
aagggtggg agcgtgagat caagtcgggc aagctcactg gcaagaccct cctcgaggcc 540
attgactcca tcgagcccc caagegtccc gtcgacaagc cctccgact tccccctcag 600
gatgtctaca agatcggtgg tattggcacg gttcccgtcg gccgtatcga gactgggtgc 660
atcaagcccc gtaggtgctg taccttcgac ccttccaacg tcaccactga agtcaagtcc 720
gtcgagatgc accacgagca gctctytgag ggtcttcccg gtgacaacgt cggcttcaac 780
gtkaagaacg tytccgtcaa ggagatccga cgtggcaacg tcgctgggtg ctccaagaac 840

```



```

gaccccccty tgggtgcccgc ctcttttcacc gccagggtca ttgtcctcaa ccaccctggc 900
cagggtcgggtg ccggttacgc ccccgtttytg gactgccaca ctgcccacat tgcctgcaag 960
ttcgccgaga tccaggagaa gatcgaccgc cgaactggta aggctgttga gtccgcccc 1020
aagttcatca agtctgggtga ctccgccatc gtcaagatgg ttccctccaa gcccatgtgc 1080
gttgagggtt tcaactgacta cccccct 1107

```

<210> 1284

<211> 1045

<212> DNA

<213> *Sporothrix schenckii* ATCC 14285

<400> 1284

```

gctcaaggcc gagcgtgagc gcggtatcac catcgatatt gctctgtgga agttcgagac 60
ccccaagtac tacgtcaccg tcattgacgc ccccggtcat cgcgatttca tcaagaacat 120
gatcactggg accctgcagg ccgactgcgc cattctcatc attgccgctg gtactgggtga 180
gttcgagggt ggtatctcca aggatggcca gactcgtgag cacgctctgc tcgcctacac 240
cctgggtgtg cggcagctga tcgtcgccat caacaagatg gacacggcca agtggggtga 300
ggctcggttac caggagatca tcaaggagac ctccaacttc atcaagaagg tcggctacaa 360
ccccaagact gttgccttcg tccccatctc gggcttccac ggcgacaaca tgcttactcc 420
ctcgaccaac tgcccctggt acaagggtcg ggagaaggag ggcaagagcg gcaagggttac 480
cggtaagact ctgctggacg ccattgacgc cgtcgagccc cccaagcgcc ccacggacaa 540
gcccctgcgt ctgcccctcc aggatgtcta caagatcggc ggtatcgcca ctgtccctgt 600
cggccgtatc gagactgggtg tcctgaagcc cggcatgggtc gtcacctttg ccccgctcaa 660
cgtcaccact gaagtcaagt ccgtcgagat gcaccacgag cagcttggtg aggggtgttcc 720
cggcgacaac gtcggttca acgtcaagaa cgtytccgtc aaggagatcc gtygtggcaa 780
cgttgccggt gactccaaga acgaccccc ctcgggcgcc gccaccttca acgcccaggt 840
caccgcccac attgcctgca agttcaccca gatccttgag aagatcgacc gccgtaccgg 900
caagtcggtt gagaacaacc ccaagttcat caagtcgggt gacgccgcca ttgtcaagct 1020
gacgccctyg aagcccatgt gcgtt 1045

```

<210> 1285

<211> 764

<212> DNA

<213> *Aspergillus nidulans* strain WSA-176

<400> 1285

```

ttgccagtgg tccgaggccc gttacaacga aatcgtcaag gagacttccg gtttcatcaa 60
gaaggctcga tacaaccccc agtcggttgc cttcgtcccc atctccggtt tcaacgggtga 120
caacatgctc gaggcctcta ccaactgccc ctggtacaag ggttgggaga aggagaccaa 180
ggccggtaag gccactggta agaccctcct tgaggccatc gacgccattg agccccccac 240
ccgtccctcc aacaagcccc tccgtcttcc cctccaggat gtctacaaga tctccgggtat 300
tggaactgtc cccgtcggcc gtgtcgagac tgggtgttat acccccggca tggctgtcac 360
cttcgctcct gccaacgtca ccaactgaag tttcaacgtc aagtccggtt gagatgcacc accagcagct 420
caaggagggt gtccccgggtg acaacgtcgg tttcaacgtc aagaacgttt ccgtaagga 480
aatccgtcgt ggtaacgttg cctccgactc caagaacgac cccgcctccg gcgctgcctc 540
tttcaacgcc cagggtcatcg ttctcaacca ccccggtcag gtcggtgctg gttacgcccc 600
cgtectcgac tgccacaccg cccacattgc ttgcaagttc tctgagcttc ttgagaagat 660
tgaccgccgt accggaaaagg ctggtgaaac cagccccaag ttcataagat cccgtgacgc 720
tgccatcgtc aagatgattc cttccaagcc catgtgcgkt ccga 764

```

<210> 1286

<211> 971

<212> DNA

<213> *Cladophialophora carrionii* ATCC 16264

<400> 1286

```

accatcgata tcgcgctctg gaagttcgag actcccaagt acttcgtcac cgtcatcgat 60
gcccctgggt atcgtgactt catcaagaac atgatcactg gtacctccca ggctgattgt 120
gctattctca tcattgccgc tggtactggt gagttcgagg ccggtatctc caaggtggc 180
cagaccggtg agcatgctct gctcgcctac accctgggag tgaagcagct tatcgtcgcc 240
atcaacaaga tggacaccac caaatgggtc gaggatcggt tcaacgaaat catcaaggag 300
acttccaact tcataagaa ggtcggatag aaccccaagt ccgttccatt cgtgcccatc 360

```

```

tccgggttca acggtgacaa catgatcgac gtctccacca atgccccctg gtacaagggc 420
tggaagaaagg agtccaaggc tggcaaggcc accggcaaga ccctccttga ggctatcgac 480
tccatcgacc ctctgtctcg tcccaccgac aagcctctcc gtctcccact ccaggatgtc 540
tacaagattt ctggtatcgg caggtgccc gtcggtcgtg ttgagactgg taccatcaag 600
gccggtatgg tcgtcacctt tgcccccgcc aacgtcacca ctgaagtcaa gtccgtcgaa 660
atgcaccacg aacagctygc cgaggcggtt ccgggtgaca acgtcggctt caacgtcaag 720
aacgtytccg tgaaggaggt tcgtcgtgga aacgttgctg gtgactccaa gaacgacccc 780
cccaaggggtg ccgactcctt caacgcccag gtcactgtcc tcaaccaccc tggtcaggtc 840
ggtgtgtggt acgccccggt cttggattgc cacactgccc acattgcctg caagttctyt 900
gagctcctcg agaagatcga tcgtcgkacc ggcaagtcca tggaaaacaa cccaagttc 960
atcaagtctg g

```

<210> 1287
 <211> 732
 <212> DNA
 <213> *Exserohilum rostratum* strain WSA-215

```

<400> 1287
ggtctgagga ccgttaccag gagatcatca aggagacctc caacttcate aagaaggctcg 60
gctacaaccc caagcacgtt cccttcgtcc ccatctccgg tttcaacgga gacaacatga 120
tcgaggcctc cagcaactgc ccctgggtaca aggggttgga gaaggagacc aaggccaagg 180
ccactggtaa gaccctcctt gaggccattg acgccatcga ccctcccagc cgtcctaccg 240
acaagcccct ccgtcttccc ctccaggatg tctacaagat tgggtggtatt ggcacgggtt 300
ccgtcggctg tgcgagacc ggtatcatca aggcgggtat ggtcgtcacc ttcgcccccg 360
ctggtgtcac cactgaagtc aagtccgtcg agatgcacca cgagcagctt accgagggtg 420
tccccgggtg caacgtcggc ttcaacgtca agaacgtctc cgtcaaggag atccgtcgtg 480
gtaacgttgc cggtgactcc aagaacgacc cccccaaggg ctgcgagtct ttcaacgctc 540
aggtcattgt cctcaaccac cctgggtcagg tcgggtgccg ttacgcgcca gtcctcgact 600
gccacaccgc ccacattgcc tgcaagttct ctgagctcct cgagaagatt gaccgcccgt 660
ccggaagtc tgtcgaagcc tctcccaagt tcatcaagtc tgggtgacgc gccatcgtca 720
agatggttcc ct

```

<210> 1288
 <211> 337
 <212> DNA
 <213> *Bacillus thuringiensis* strain HER 1236

```

<400> 1288
aatggatcct gtatacgcac aaaaattagg cgtaacata gatgaatttc tattatcaca 60
gcctgatata ggggagcaag gattggaaat cgcggaagca cttgtacgaa gtggtgcggt 120
tgacattatc gtaattgact ctgtagcagc tcttgtagcg aaagcagaga ttgaaggcga 180
tatgggtgac tcacacgtag gtttacaagc acgtttaatg tcacaagcac ttmgtgaagct 240
ttcaggagca atcaacaaat carrarcaat wgcaatcttt attaaccaaa ttcgwgaaaa 300
agttgggggt atgttcggaa acccagaaac aactcca

```

<210> 1289
 <211> 336
 <212> DNA
 <213> *Bacillus thuringiensis* strain HER 1232

```

<400> 1289
aatggatcct gtatatgcac aaaaattagg cgtaacata gatgaatttc tattatcaca 60
gcctgatata ggggagcaag gattggaaat cgcggaagca cttgtacgaa gtggtgcggt 120
tgacattatc gtaattgact ctgtagcagc tcttgtagcg aaagcagaga ttgaaggcga 180
tatgggtgac tcacacgtag gtttacaagc acgtttaatg tcacaagcac ttmgtgaagct 240
ttcaggagca atcaacaaat caraarcaat tgcaatcttt attaaccaaa ttcgtgaaaa 300
agttgggggt atgttcggaa acccagaaac aactcc

```

<210> 1290
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (13)..(13)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (13)..(13)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 1290
gaytaygcna tgnsngtnat hgt

23

<210> 1291
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 1291
gcnytnccng aygtnmgnga ygg

23

<210> 1292
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (18)..(18)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base

<222> (9)..(9)

<223> i

<220>

<221> modified_base

<222> (12)..(12)

<223> i

<220>

<221> modified_base

<222> (18)..(18)

<223> i

<400> 1292

arnscytca rnatrtgngc

20

<210> 1293

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1293

atggctgaat tacctcaatc

20

<210> 1294

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1294

atgattgttg tatatcttct tcaac

25

<210> 1295

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1295
cagaaagttt gaagcgttgt 20

<210> 1296
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1296
aacgattcgt gagtcagata 20

<210> 1297
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1297
cgtcaacat tgaggaagag ct 22

<210> 1298
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1298
acgaaatcga ccgtctcttt ttc 23

<210> 1299
<211> 2661
<212> DNA
<213> Staphylococcus aureus strain 601055

<400> 1299
atggctgaat tacctcaatc aagaataaat gaacgaaata ttaccagtga aatgcgtgaa 60
tcatttttag attatgcat gagtggtatc gttgctcgtg cattgccaga tgttcgtgac 120
ggttttaaacc cagtacatcg tcgtatacta tatggattaa atgaacaagg tatgacaccg 180
gataaatcat ataaaaaatc agcacgtatc gttgggtgacg taatgggtaa atatcaccct 240
catgggtgact catctattta tgaagcaatg gtacgtatgg ctcaagattt cagttatcgt 300
tatccgcttg ttgatggcca aggtaacttt ggttcaatgg atggagatgg cgcagcagca 360
atgcgttata ctgaagcgcg tatgactaaa atcacacttg aactgttacg tgatattaat 420
aaagatacaa tagattttat cgataactat gatggtaatg aaagagagcc gtcagtctta 480
cctgctcgat tccctaattt attagccaat ggtgcatcag gtatcgcggt aggtatggca 540
acgaatattc caccacataa cttaacagaa ttaatcaatg gtgtacttag cttaagtaag 600
aaccgtgata tttcaattgc tgagttaatg gaagatattg aaggctctga tttcccaact 660
gctggactta ttttaggtaa gagtggtatt agacgtgcat atgaaacagg tcgtggttca 720
attcaaatgc gttctcgtgc agttattgaa gaacgtggag gcggacgtca acgtattgtt 780
gtcactgaaa ttcctttcca agtgaataag gctcgtatga ttgaaaaaat tgcagagctc 840
gttcgtgaca agaaaattga cggtatcact gatttacgtg atgaaacaag tttacgtact 900
gggtgctgtg tcgttattga tgtgcgtaag gatgcaaatg ctagtgtcat tttaaataac 960
ttatacaaac aaacacctct tcaaacatca tttgggtgtga atatgattgc acttgtaaat 1020

ggtagaccga	agcttattaa	tttaaaagaa	gcgttggtac	attatattaga	gcatcaaaaag	1080
acagttgtta	gaagacgtac	gcaatataac	ttacgtaaag	ctaaagatcg	tgcccatatt	1140
ttagaagggt	tacgtatcgc	acttgaccat	atcgatgaaa	ttatttcaac	gattcgtgag	1200
tcagatacag	ataaagttgc	aatggaaagc	ttgcaacaac	gcttcaaact	ttctgaaaaa	1260
caagctcaag	ctattttaga	catgcgttta	agacgtctaa	cagggtttaga	gagaaacaaa	1320
attgaagctg	aatataatga	gttatttaa	tatattagtg	aattagaagc	catcttagct	1380
gatgaagaag	tggtattaca	gtaggttaga	gatgaattga	ctgaaattag	agatcgtttc	1440
ggtgatgagc	gtcgtacaga	aattcaatta	ggtggatttg	aagacttaga	ggacgaagac	1500
tttaattccag	aagaacaaat	agtaattact	ttgagccata	ataactacat	taaacgtttg	1560
ccggtatcta	catatcgtgc	tcaaaaccgt	ggtggtcgtg	gtgttcaagg	tatgaatata	1620
ttggaagaag	attttgtcag	tcaattggta	actttaagta	cacatgacca	tgtattgttc	1680
tttactaaca	aaggctcgtg	atacaaacta	aaagggttatg	aagtgcctga	gttatcaaga	1740
cagctctaaag	gtattcctgt	agtgaatgct	attgaacttg	gaaatgatga	agtcattagt	1800
acaatgattg	ctgtttaaaga	ccttgaaagt	gaagacaact	tcttagtggt	tgcaactaaa	1860
cgtgggtgtg	ttaaacgttc	agcattaagt	aacttctcaa	gaataaatag	aaatggtaag	1920
attgcgattt	cgttcagaga	agatgatgag	ttaatgtcag	tctgtttaac	aagtgggtcaa	1980
gaagatatct	tgattggtac	atcacatgca	tcaattatc	gattccctga	atcaacatta	2040
cgtccttttag	gccgtacagc	aacgggtgtg	aaagggtatta	cacttcgtga	agggtgacgaa	2100
ggtgtagggc	ttgatgtagc	tcatgcaaac	agtgttgatg	aagtattagt	agttactgaa	2160
aatgggttatg	gtaaacgtac	gccagttaat	gactatcgtt	tatcaaatcg	tggtgggtaaa	2220
ggtattaaaa	cagctacgat	tactgagcgt	aatggtaatg	ttgtatgtat	cactacagta	2280
actggtgaag	aagattta	gattgttact	aatgccgggt	tcattattcg	actagatggt	2340
gcagatatctt	ctcaaaatgg	tctgtcagca	caagggtgttc	gcttaattcg	cttaggcgat	2400
gatcaatttg	tttcaacggt	tgctaaagta	aaagaggatg	cagatgaagt	aaatgaagat	2460
gaacaatcta	ctgtatctga	agatgggtact	gaacaacaac	gtgaagcggg	tgtaaatgat	2520
gaaacaccag	gaaatgcaat	tcatactgaa	gtgattgatt	cagaagaaaa	tgatgaagat	2580
ggacgtattg	aagtaagaca	agatttcatg	gatcgtgttg	aagaagatat	acaacaatca	2640
tcagatgaag	atgaagaata	a				2661

<210> 1300

<211> 2628

<212> DNA

<213> Escherichia coli strain K12

<400> 1300

atgagcgacc	ttgcgagaga	aattacaccg	gtcaacattg	aggaagagct	gaagagctcc	60
tatctggatt	atgcgatgtc	ggtcattgtt	ggcgtgctgc	tgccagatgt	ccgagatggc	120
ctgaagcccg	tacaccgtcg	cgtactttac	gccatgaacg	tactaggcaa	tgactggaac	180
aaagcctata	aaaaatctgc	ccgtgtcgtt	ggtgacgtaa	tcggtaataa	ccatcccat	240
ggtgactcgg	cggctctatga	cacgatcgtc	cgtatggcgc	agccattctc	gctgcgttat	300
atgctggtag	acggtcaggg	taacttcggt	tctatcgacg	gcgactctgc	ggcggcaatg	360
cgttatacgg	aaatccgtct	ggcgaaaatt	gcccatgaac	tgatggccga	tctcgaaaaa	420
gagacggctc	atttcggtta	taactatgac	ggcacggaaa	aaattccgga	cgctcatgcca	480
accaaaattc	ctaaccctgct	ggtagaacgtg	tcttcgggta	tcgcgcgtagg	tatggcaacc	540
aacatcccgc	cgcacaacct	gacggaagtc	atcaacgggt	gtctggcgta	tattgatgat	600
gaagacatca	gcattgaagg	gctgatggaa	cacatcccgg	agccggactt	cccgcggtcg	660
gcaatcatta	acggctcgtcg	cggatattgaa	gaagcttacc	gtaccgggtcg	cggcaagggtg	720
tatatccgcg	ctcgcgcaga	agtggaaagt	gacgccaaaa	ccggctcgtga	aaccattatc	780
gtccacgaaa	ttcgcgtatca	ggtaaaacaaa	cgcgcgctga	tcgagaagat	tgccggaactg	840
gtaaaagaaa	aacgcgtgga	aggcatcagc	gcgctgcgtg	acgagtctga	caaagacggt	900
atgcgcacgc	tgattgaagt	gaaacgcgat	gcggctcggg	aagttgtgct	caacaacctc	960
tactcccaga	cccagttgca	ggtttctttc	ggtatcaaca	tggtggcatt	gcaccatggt	1020
cagccgaaga	tcatgaacct	gaaagacatc	atcgcggcgt	ttgttcgtca	ccgccgtgaa	1080
gtggtgaccc	gtcgtactat	tttcgaactg	cgtaaagctc	gcgactcgtg	tcatatcctt	1140
gaagcattag	ccgtggcgct	ggcgaacatc	gacccgatca	tcgaactgat	ccgtcatgctg	1200
ccgacgcctg	cagaagcgaa	aactgcgctg	ggttgctaate	cgtggcagct	gggcaacggt	1260
gccgcgatgc	tcgaacgtgc	tggcgacgat	gctgcgcgtc	cggaatggct	ggagccagag	1320
ttcggcgtgc	gtgatggtct	gtactacctg	accgaacagc	aagctcaggc	gattctggat	1380
ctgcgtttgc	agaaaactgac	cggctcttgag	cacgaaaaac	tgctcgacga	atacaaagag	1440
ctgctggatc	agatcgcgga	actggtgcgt	attcttggtg	gcgccgatcg	tctgatggaa	1500
gtgatccgtg	aagagctgga	gctgggttcgt	gaacagttcg	gtgacaaaac	tcgtactgaa	1560
atcacccgca	acagcgcaga	catcaacctg	gaagatctga	tcacccagga	agatgtgggtc	1620
gtgacgctct	ctcaccagggt	ctacgttaag	tctcagccgc	tttctgaata	cgaagcgcag	1680
cgctcgtggc	ggaaaggtaa	atctgccgca	cgtattaaag	aagaagactt	tatcgaccga	1740
ctgctgggtg	cgaacactca	cgaccatatt	ctgtgcttct	ccagccgtgg	tcgcgtctat	1800

tcgatgaaag	tttatcagtt	gccggaagcc	actcgtggcg	cgcgcggtcg	tccgatcgtc	1860
aacctgctgc	cgctggagca	ggacgaacgt	atcactgcga	tcctgccagt	gaccgagttt	1920
gaagaaggcg	tgaaagtctt	catggcgacc	gctaacggta	ccgtgaagaa	aactgtcctc	1980
accgagttca	accgtctgcg	taccgccggg	aaagtggcga	tcaaactggg	tgacggcgat	2040
gagctgatcg	gcgttgacct	gaccagcggc	gaagacgaag	taatgctgtt	ctccgctgaa	2100
ggtaaagtgg	tgcgctttta	agagtcttct	gtccgtgcga	tgggctgcaa	caccaccggg	2160
gttcgcggta	ttcgcttagg	tgaaggcgat	aaagtcgtct	ctctgatcgt	gcctcgtggc	2220
gatggcgcaa	tcctcaccgc	aacgcaaaac	ggttacggta	aacgtaccgc	agtggcgga	2280
tacccaacca	agtcgcgtgc	gacgaaaagg	gttatctcca	tcaagggttac	cgaacgtaac	2340
ggtttagttg	ttggcgcggt	acaggtagat	gactgcgacc	agatcatgat	gatcaccgat	2400
gccggtacgc	tggtacgtac	tcgcgtttcg	gaaatcagca	tcgtgggccc	taacacccag	2460
ggcgtgatcc	tcacccgtac	tcgcggaagt	gaaaacgtag	tgggtctgca	acgtgttgct	2520
gaaccgggtg	acgaggaaga	tctggatacc	atcgacggca	gtgccgcgga	aggggacgat	2580
gaaatcgctc	cggaagtgga	cgttgacgac	gagccagaag	aagaataa		2628

<210> 1301

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (3)..(3)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (6)..(6)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (9)..(9)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (15)..(15)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (18)..(18)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base

<222> (6)..(6)

<223> i

<220>

<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 1301
gtnmgnawnm gnccngsnat gta

23

<210> 1302
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 1302
tanadnggng gnkkngcnat rta

23

<210> 1303
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)

<223> i

<220>

<221> modified_base

<222> (6)..(6)

<223> i

<220>

<221> modified_base

<222> (9)..(9)

<223> i

<220>

<221> modified_base

<222> (12)..(12)

<223> i

<220>

<221> modified_base

<222> (15)..(15)

<223> i

<400> 1303

ggngangand ynmngngargg

20

<210> 1304

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (2)..(2)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (8)..(8)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (11)..(11)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (14)..(14)

<223> n represents a modified base

<220>

<221> modified_base

<222> (2)..(2)

<223> i

<220>

<221> modified_base

<222> (8)..(8)

<223> i

<220>

<221> modified_base
<222> (11)..(11)
<223> i

<220>
<221> modified_base
<222> (14)..(14)
<223> i

<400> 1304
cnaryttncy nttngtytg

19

<210> 1305
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1305
atggtgactg cattgtcaga tg

22

<210> 1306
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1306
gtctacgggt ttctacaacg tc

22

<210> 1307
<211> 1923
<212> DNA
<213> Staphylococcus aureus

<400> 1307
atggtgactg cattgtcaga tgtaaacaac acggataatt atggtgctgg gcaaatacaa 60
gtattagaag gtttagaagc agtacgtaaa agaccaggta tgtatatagg atcgactcag 120
agagagttgc acattagtgt ggaaattgtc gataatagta tcgatgaagc attagctggt 180
tatgcaaata aaattgaagt tggtattgaa aaagataact ggattaaagt aacggataac 240
ggacgtggta tcccagttga tattcaagaa aaaatgggac gtccagctgt cgaagttatt 300
ttaactgttt tacatgctgg tggtaaattc ggcgggtggcg gatacaaagt atctggtggt 360
ttacatgggtg ttggttcac agttgtaaac gcattgtcac aagacttaga agtatatgta 420
cacagaaatg agactatata tcatcaagca tataaaaaag gtgtacctca atttgactta 480
aaagaagttg gcacaactga taagacaggt actgtcattc gttttaaagc agatggagaa 540
atcttcacag agacaactgt atacaactat gaaacattac agcagcgtat tagagagctt 600
gctttcttaa acaaaggaat tcaaatcaca ttaagagatg aacgtgatga agaaaaacgtt 660
agagaagact cctatcacta tgagggcggt attaaatcgt acgttgagtt attgaacgaa 720
aataaagaac ctattcatga tgagccaatt tatattcatc aatctaaaga tgatattgaa 780
gtagaaattg cgattcaata taactcagga tatgccacaa atcttttaac ttacgcaa 840
aacattcata cgtaacgaag tggtacgcat gaagacggat tcaaacgtgc attaacgcgt 900
gtcttaataa gttatgggtt aagtagcaga tatgaagaag aaaagatagc ttctggtgaa 960
gatacacgag aagggtatgac agcaattata tctatcaaac atggtgatcc tcaattcgaa 1020
gggtcaaacga agacaaaatt aggttaattct gaagtgcgtc aagttgtaga taaattattc 1080
tcagagcact ttgaacgatt tttatatgaa aatccacaag tcgcacgtac agtggttgaa 1140
aaaggtatta tggcggcacg tgcacgtgtt gctgcgaaaa aagcgcgtga agtaacacgt 1200
cgtaaatacag cgttagatgt agcaagtctt ccaggtaaat tagccgattg ctctagtcaa 1260

```
agtcctgaag aatgtgagat tttcttagtc gaaggggact ctgccggagg gtctacaaaa 1320
tctggtcgtg actctagaac gcaggcgatt ttaccattac gaggtaagat attaaatggt 1380
gaaaaagcac gattagatag aattttgaat aacaatgaaa ttcgtcaa atcacagca 1440
tttggtagag gaatcgggtg cgactttgat ctacgcaa caagatatca caaatcgtc 1500
attatgactg atgccgatgt ggatggagcg catattagaa cattgttatt aatattcttc 1560
tatcgattta tgagaccgtt aattgaagca ggctatgtgt atattgcaca gccaccgttg 1620
tataaactga cacaaggtaa acaaaagtat tatgtataca atgataggga acttgataaa 1680
cttaaactct aattgaatcc aacacaaaaa tggctctatt cgctatacaa aggtcttgga 1740
gaaatgaatg cagatcaatt atgggaaaca acaatgaacc ctgagcaccg cgctctttta 1800
caagtaaaac ttgaagatgc gattgaagcg gaccaa acat ttgaaatgtt aatgggtgac 1860
gtttagataa accgtagaca atttatagaa gataatgcag tttatgcaa cttagacttc 1920
taa
```

<210> 1308

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (9)..(9)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (21)..(21)

<223> n represents a modified base

<220>

<221> modified_base

<222> (9)..(9)

<223> i

<220>

<221> modified_base

<222> (12)..(12)

<223> i

<220>

<221> modified_base

<222> (21)..(21)

<223> i

<400> 1308

atgtaygtna tnatggaymg ngc

23

<210> 1309

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 1309
atnatytttrt tncyyttnc ytt

23

<210> 1310
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<400> 1310
atnatntsna tnacytcrtc

20

<210> 1311
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 1311
garatgaara tnmgnngnga rca

23

<210> 1312
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (21)..(21)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<400> 1312
aartayatna tncargarmg ngc

23

<210> 1313
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 1313
amnaynckrt gnggnttntt ytt

23

<210> 1314
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (18)..(18)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base

<222> (6)..(6)

<223> i

<220>

<221> modified_base

<222> (12)..(12)

<223> i

<220>

<221> modified_base

<222> (15)..(15)

<223> i

<220>

<221> modified_base

<222> (18)..(18)

<223> i

<400> 1314

tangannttya cngansmnca rgc

23

<210> 1315

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (3)..(3)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (6)..(6)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (9)..(9)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (18)..(18)

<223> n represents a modified base

<220>

<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<400> 1315
acnatngcnt cngcytgnks ytc

23

<210> 1316
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1316
gtgagtgaaa taattcaaga tt

22

<210> 1317
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1317
caccaaaatc atctgtatct ac

22

<210> 1318
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1318
acctaytcsa tgtacgtrat catgga

26

<210> 1319
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<400> 1319
agrtcgtcna ccacgcgyag ytt

23

<210> 1320
<211> 2259
<212> DNA
<213> Escherichia coli strain K-12 MG1655

<400> 1320
atgagcgcata tggcagagcg ccttgcgccta catgaattta cggaaaaacgc ctacttaaac 60
tactccatgt acgtgatcat ggaccgtgcg ttgccgttta ttggtgatgg tctgaaacct 120
gttcagcgcc gcatttgtga tgcgatgtct gaactgggcc tgaatgccag cgccaaattt 180
aaaaaatcgg cccgtaccgt cgggtgacgta ctgggtaaat accatccgca cggcgatagc 240
gcctgtttatg aagcgatggc cctgatggcg caaccgttct cttaccgtta tccgctgggt 300
gatggtcagg ggaactgggg cgcgcgggac gatccgaaat cgttcgcggc aatgcgttac 360
accgaatccc gggtgtcgaa atattccgag ctgctattga acggacgtgg gcaggggacg 420
gctgactggg tgccaaactt cgacggcact ttgcaggagc cgaaaatgct acctgcccgt 480
ctgccaaaaca ttttgcttaa cggcaccacc ggtattgccg tcggcatggc gaccgatatt 540
ccaccgcata acctgcgtga agtggctcag gcggcaatcg cattaatcga ccagccgaaa 600
accacgctcg atcagctgct ggatatcgtg caggggcccgg attatccgac tgaagcggaa 660
attatcactt cgcgcgccga gatccgtaaa atctacgaga acggacgtgg ttcagtgcgt 720
atgcccgcgg tgtggaagaa agaagatggc gcggtgggta tcagcgcatt gccgcatacag 780
gtttcaggtg cgcgcgtact ggagcaaatt gctgcgcaaa tgcgcaacaa aaagctgccg 840
atgggttgacg atctgcgcga tgaatctgac cacgagaacc cgacccgcct ggtgattgtg 900
ccgcgttcca accgcgtgga tatggatcag gtgatgaacc acctcttcgc taccaccgat 960
ctggaaaaga gctatcgat taaccttaat ctccgaatgg ctggtgttcc gccgcgatac cgtgcgccgc 1080
aaaaacctgc tggaaatcct ctccgaatgg ctggtgttcc gccgcgatac cgtgcgccgc 1080
cgactgaact atcgtctgga gaaagtcctc aagcgcctgc atatcctcga aggtttgtctg 1140
gtggcggttc tcaatatcga cgaagtgatt gagatcattc gtaatgaaga tgaaccgaaa 1200
ccggcgctga tgtcgcgggt tggccttacg actggaagag atgaagattc gcggtgagca gactgaactg 1320
gaaaaagagc gcgaccagtt gcagggcatt ttggcttccg agcgtaaaat gaataacctg 1380
ctgaagaaag aactgcaggc agacgcgcaa gcctacggtg acgatcgctg ttcgccgttg 1440
caggaacgcg aagaagcgaa agcgatgagc gagcacgaca tgctgccgtc tgaacctgtc 1500
accattgtgc tgcgcagat gggctgggta cgcagcgcta aaggccatga tatcgacgcg 1560
ccgggcctga attataaagc ggggtatagc ttcaaagcgg cggtgaaagg taagagcaac 1620
caaccggtag tgtttgttga ttccaccggt cgtagctatg ccattgaccc gattacgctg 1680
ccgtcggcgc gtggtcaggg cgagccgctc accggcaaat taacgttgcc gcctggggcg 1740
accgttgacc atatgctgat ggaaagcgac gatcagaac ttctgatggc ttccgatgcg 1800
ggttacgggt tcgtctgcac ctttaacgat ctggtggcgc gtaaccgtgc aggttaaggct 1860
ttgatcacct taccgaaaaa tgcccattgt atgccgcggg tgggtgattga agatgcttcc 1920
gatatgctgc tggcaatcac tcaggcaggc cgtatgttga tgttcccggg aagtgatctg 1980
ccgcagctgt cgaagggcaa aggcaacaag attatcaaca ttccatcggc agaagccgcg 2040
cgtggagaag atggtctggc gcaattgtac gttctgccgc cgcaaagcac gctgaccatt 2100
catgttgga aacgcaaaat taaactgcgc ccggaagagt tacagaaagt cactggcgaa 2160
cgtggacgcc gcggtacgtt gatgcgcggg ttgcagcgta tcgatcgtgt tgagatcgac 2220

tctcctcgcc gtgccagcag cggatgatgc gaagagtaa

2259

<210> 1321
<211> 2403
<212> DNA
<213> Staphylococcus aureus strain KMP9

<400> 1321
gtgagtgaaa taattcaaga tttatcactt gaagatgttt taggtgatcg ctttggaaga 60
tatagtaaat atattattca agagcgtgca ttgccagatg ttcgtgatgg tttaaaacca 120
gtacaacgtc gtattttata tgcaatgtat tcaagtggta atacacacga taaaaatttc 180
cgtaaaagtg cgaaaacagt cggatgatgt attgggtcaat atcatccaca tggagacttc 240
tcagtgtaca aagcaatggg ccgtttaagt caagactgga agttacgaca tgtcttaata 300
gaaatgcatg gtaataatgg tagtatcgat aatgatccgc cagcggcaat gcgttacact 360
gaagctaagt taagcttact agctgaagag ttattacgtg atattaataa agagacagtt 420
tctttcattc caaactatga tgatacgaca ctccaaccaa tggatttgcc atcaagattt 480
cctaacttac tagtgaatgg ttctacaggt gattcaagca acacttaaat atattgataa tccggatatt 600
ccacataatt tagctgaagt ttctcaagca acacttaaat atattgataa tccggatatt 660
acagtcaatc aattaatgaa atataatgaa ggtcctgatt ttccaactgg tggattattt 720
caaggtattg atgggtattaa aaaagcttat gaatcaggta aaggtagaat tatagttcgt 780
tctaaagttg aagaagaaac tttacgcaat ggacgtaaac agttaattat tactgaaatt 840
ccatatgaag tgaacaaaag tagcttagta aaacgtatcg atgaattacg tgctgacaaa 900
aaagtcgatg gtatcggtga agtacgtgat gaaactgata gaactgggtt acgaatagca 960
attgaattga aaaaagatgt gaacagtga tcaatcaaaa attatcttta taaaaactct 1020
gatttacaga tttcatataa tttcaacatg gtcgctatta gtgatgggtc tccaaaattg 1080
atgggtattc gtcaaattat agatagttat ttgaatcatt aaattgaggt tgttgcaaat 1140
agaacgaagt ttgaattaga taatgctgaa aaacgtatgc atatcggtga aggtttgatt 1200
aaagcgttgt caattttaga taaagtaatt gaattgatgc gtagctctaa aaacaagcgt 1260
gacgctaaag aaaaccttat cgaagtattc gagttcacag aagaacaggc tgaagcaatt 1320
gtaatgttac agttatatcg ttttaacaaac actgacatag ttgcgcttga aggtgaacat 1380
aaagaacttg aagcattaat caaacaatta cgtcatattc ttgataacca tgatgcatta 1440
ttgaatgtca taaaagaaga attgaatgaa attaaaaaga aattcaaatc tgaacgactg 1500
tctttaattg aagcagaaat tgaagaaatt aaaattgaca aagaagttat ggtgcctagt 1560
gaagaagtta ttttaagtat gacacgtcat ggatatatta aacgtacttc tattcgtagc 1620
tttaatgcta gcggtgttga ggatattggg ttaaaagatg gtgacagttt acttaaacat 1680
caagaagtaa atacgcaaga taccgtacta gtattttacaa ataaagggtc ttatctattt 1740
ataccggttc ataaattagc agatattcgt tggaaagaat tggggcaaca tgtatcaca 1800
atagttccta tcgaagaaga tgaagtgggt attaatgtct ttaatgaaaa ggactttaat 1860
acagatgcat tttatgtttt tgcgactcaa aatggcatga ttaagaaaag tacagtgcct 1920
ctatttataa caacgcgttt taataaacct ttaattgcta cttaaagttaa agaaaatgat 1980
gatttgatta gtgttatgcg ctttgaaaaa gatcaattaa ttaccgtcat tactaataaa 2040
ggatgtcat taacgtataa tacaagtga ctatcagata ccggtattaag ggcagctggg 2100
gttaaatcaa taaatcttaa agctgaagat ttcgttgtaa tgacagaagg tgtttctgaa 2160
aatgatacta tattgatggc cacacaacgc ggctcggtta aacgtattag ttttaaaatc 2220
ttacaagttg ctaaaagagc acaacgtgga ataactttat taaaagaatt aaagaaaaat 2280
ccacatcgta ttgtagctgc acatgtagtg acaggtgaac atagtcaata tacattatat 2340
tcaaaatcaa atgaagaaca tggtttaatt aatgatattc ataaatctga acaatataca 2400
aatggctcat tcattgtaga tacagatgat tttgggtgaag taatagacat gtatatttag 2403
taa

<210> 1322
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (6)..(6)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (10)..(10)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (12)..(12)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (10)..(10)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<400> 1322
rtnganaayn sngtngayga rg

22

<210> 1323
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (3)..(3)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (9)..(9)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (12)..(12)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (15)..(15)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (18)..(18)

<223> n represents a modified base

<220>

<221> modified_base

<222> (3)..(3)

<223> i

<220>

<221> modified_base

<222> (9)..(9)

<223> i

<220>

<221> modified_base

<222> (12)..(12)

<223> i

<220>

<221> modified_base

<222> (15)..(15)

<223> i

<220>

<221> modified_base

<222> (18)..(18)

<223> i

<400> 1323

acnawrsang gnggnacnca yg

22

<210> 1324

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<220>

<221> misc_feature

<222> (3)..(3)

<223> n represents a modified base

<220>

<221> misc_feature

<222> (6)..(6)

<223> n represents a modified base

<220>

<221> misc_feature
<222> (9)..(9)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (15)..(15)
<223> n represents a modified base

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<400> 1324
ccnccngcns wrtenccytc

20

<210> 1325
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<220>
<221> misc_feature
<222> (10)..(10)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (13)..(13)
<223> n represents a modified base

<220>
<221> misc_feature
<222> (16)..(16)
<223> n represents a modified base

<220>
<221> modified_base
<222> (10)..(10)
<223> i

<220>
<221> modified_base
<222> (13)..(13)
<223> i

<220>
<221> modified_base
<222> (16)..(16)
<223> i

<400> 1325
rttcatytcn ccnarnccyt t 21

<210> 1326
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1326
tgattcaata cagggttttag ag 22

<210> 1327
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1327
ctagatttcc tcctcatcaa at 22

<210> 1328
<211> 1992
<212> DNA
<213> Staphylococcus aureus strain RN4220

<400> 1328
atgaataaac aaaataatta ttcagatgat tcaatacagg ttttagaggg gttagaagca 60
gttcgtaaaa gacctggtat gtatatggga tcaactgata aacggggatt acatcatcta 120
gtatatgaaa ttgtcgataa ctccgctcgat gaagtattga atgggttacgg taacgaaata 180
gatgtaacaa ttaataaaga tggtagtatt tctatagaag ataatggacg tggtagtcca 240
acagggtatac ataaatcagg taaaccgaca gtcgaagtta tctttactgt ttacatgca 300
ggaggtaaat ttggacaagg cggctataaa acttcagggtg gtcttcacgg tgttggtgct 360
tcagttgtaa atgcattgag tgaatggcct gaagttgaaa tccatcgaga tggtaatata 420
tatcatcaaa gttttaaaaa cgggtggttcg ccatcttctg gtttagtgaa aaaaggtaaa 480
actaagaaaa caggtagcaa agtaacattt aaacctgatg acacaatttt taaagcatct 540
acatcattta attttgatgt tttaagttaa cgactacaag agtctgcgtt cttattgaaa 600
aatttaaaaa taacgcttaa tgatttacgc agtggttaaag agcgtcaaga gcattaccat 660
tatgaagaag gaatcaaaga gtttgttagt tatgtcaatg aaggaaaaga agttttgcat 720
gacgtggcta cattttcagg tgaagcaaat tttgttaaata atgtacgtac tttccaatat 780
aatgatcaat attcagaaag tattttaagt taaaacagca atgacacgtg tatttaataga ttatgcacgt 900
ggtacacatg aagttgggtt taaaacagca atgacacgtg tatttaataga tcgtgaagggt 960
cgtattaatg aacttaaaac aaaagataaa aacttagatg gtaatgatat tgcaatttga aggacaaacg 1020
ttaacagctg ttgtgtctgt tcgtattcca gaagaattat tgcaatttga aggacaaacg 1080
aaatctaaa ttgggtacttc tgaagctaga agtgctgttg attcagttgt tgcagacaaa 1140
ttgccattct atttagaaga aaaaggacaa tttgtctaat cacttggtgaa aaaagcgatt 1200
aaagcacaac aagcaaggga agctgcacgt aaagctcgtg aagatgctcg ttcaggtaag 1260
aaaaacaagc gtaaagacac tttgctatct ggttaaattaa cacctgcaca aagtaaaaaac 1320
actgaaaaaa atgaattgta tttagtcgaa ggtgattctg cgggagggttc agcaaaaactt 1380
ggacgagacc gcaaatcca agcgatatta ccattacgtg gtaaggtaat taatacagag 1440
aaagcacgtc tagaagatat ttttaaaaat gaagaaatta atacaattat ccacacaatc 1500
ggggcaggcg ttggtactga ctttaaaatt gaagatagta attataatcg tgtaattatt

atgactgatg	ctgatactga	tgggtgcgcat	attcaagtgc	tattgttaac	attcttcttc	1560
aaatatatga	aaccgcttgt	tcaagcaggt	cgtgtattta	ttgctttacc	tccactttat	1620
aaattggaaa	aaggtaaagg	caaaacaaaag	cgagttgaat	acgcttggac	agacgaagag	1680
cttaataaat	tgcaaaaaga	acttggtaaa	ggcttcacgt	tacaacgtta	caaagggttg	1740
ggtgaaatga	accctgagca	attatgggaa	acgacgatga	acccagaaac	acgaacttta	1800
attcgtgtac	aagttgaaga	tgaagtgcgt	tcatactaac	gtgtaacaac	attaatgggt	1860
gacaaagtac	aacctagacg	tgaatggatt	gaaaagcatg	ttgagtttgg	tatgcaagag	1920
gaccaaagta	ttttagataa	ttctgaagta	caagtgcctg	aaaatgatca	atttgatgag	1980
gaggaaatct	ag					1992

<210> 1329
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 1329	25
tgtagagcgc ggtatcatca aagta	

<210> 1330
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 1330	22
agattcgaac ttggtgtgcg gg	

<210> 1331
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 1331	30
gcccttgagg tacagaatgg taatgaagtt	

<210> 1332
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide

<400> 1332	20
gaccgcggcg cagaccatca	

<210> 1333
 <211> 23
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1333

tcatggtgac ttatctatatt atg

23

<210> 1334

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1334

catctatttta taaagcaatg gta

23

<210> 1335

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1335

ctatttatgg agcaatggt

19

<210> 1336

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1336

tggagactac tcagtgt

17

<210> 1337

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1337

tggagacttc tcagtgt

17

<210> 1338

<211> 15

<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1338
gtgtacggag caatg 15

<210> 1339
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1339
ccagcggaaa tgcgt 15

<210> 1340
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1340
gaacaaggta tgacaccgga taaat 25

<210> 1341
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1341
gataactgaa atcctgagcc atacg 25

<210> 1342
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1342
gatggtattg gtcaatatca tcca 24

<210> 1343
<211> 29
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1343
aagaaactgt ctctttatta atatcacgt 29

<210> 1344
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1344
agcagcaacg atgttacgca gcag 24

<210> 1345
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1345
cccgccgagc atttcaacta ttg 23

<210> 1346
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1346
gatgttacgc agcagggcag tc 22

<210> 1347
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1347
accaagcagg ttcgcagtca agta 24

<210> 1348
<211> 750
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Unidentified

bacterium

```
<400> 1348
atgcgctcac gcaactggtc cagaaccttg accgaacgca gcggtggtaa cggcgcagtg 60
gcggttttca tggtttgta tgactgtttt tttgtacagt ctatgcctcg ggcattccaag 120
cagcaagcgc gttacgccgt gggtcgatgt ttgatgttat ggagcagcaa cgatgttacg 180
cagcagggca gtcgccctaa aacaaagtta ggccgcgatg acacaacgca ggtcacattg 240
atacacaaaa ttctagctgc ggcagatgag cgaaatctgc cgctctggat cggtagggggc 300
tgggcgatcg atgcacggct agggcggtga acacgcaagc acgatgatat tgatctgacg 360
tttcccgcg agaggcgcg cgagctcgag gcaatagttg aaatgctcgg cgggcgcgctc 420
atggaggagt tggactatgg attcttagcg gagatcgggg atgagttact tgactgcgaa 480
cctgcttggt gggcagacga agcgtatgaa atcgcggagg ctccgcaggg ctctgcccc 540
gaggcggctg agggcgctcat cgccgggagg ccagtcggtt gtaacagctg ggaggcgatc 600
atctgggatt acttttacta tgccgatgaa gtaccaccag tggactggcc taaaaagcac 660
atagagtcct acaggctcgc atgcacctca ctcggggagg aaaagggtga ggtcttgctg 720
gccgctttca ggtagcgata tgcggcctaa 750
```

<210> 1349

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1349

cagccgacca atgagtatct tgcc

24

<210> 1350

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1350

taatcagggc agttgcgact ccta

24

<210> 1351

<211> 531

<212> DNA

<213> Pseudomonas aeruginosa strain Stone 130

```
<400> 1351
atgttatgga gcagcaacga tgttacgcag cagggcagtc gccctaaaac aaagttaggt 60
ggctcaatga gcatcattgc aaccgtcaag atcggccctg acgaaatttc agccatgagg 120
gctgtgctcg atctcttcgg caaagagttt gaggacattc caacctactc tgatcgccag 180
ccgaccaatg agtatcttgc caatcttctg cacagcgaga cgttcatcgc gctcgctgct 240
tttgaccgcg gaacagcaat aggtgggctc gccgcctacg ttctacccaa gttcgagcaa 300
gcgcgaagcg agatctacat ttatgacttg gcagtcgctt ccagccatcg aaggctagga 360
gtcgcaactg ccctgattag ccacctgaag cgtgtggcgg ttgaacttgg cgcgatgta 420
atctatgtgc aagcagacta cggtagcatg ccggcagtcg ctctctacac aaagcttgg 480
gttcgggaag acgtcatgca cttcgacatt gatccaagaa ccgccaccta 531
```

<210> 1352

<211> 22

<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1352
ccacgctgac agagccgcac cg 22

<210> 1353
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1353
ggccagctcc catcggaccc tg 22

<210> 1354
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1354
cacgctgaca gagccgcacc g 21

<210> 1355
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1355
atgccgttgc tgtcgaaatc ctgcg 24

<210> 1356
<211> 810
<212> DNA
<213> *Serratia marcescens*

<400> 1356
atgaacacga tcgaatcgat cacggcggac ctgcacggac tgggcgtccg gcccggcgac 60
ctgatcatgg tccatgcata gctgaaaagcc gtcggccccg tcgagggagg tgcggcctcg 120
gtggtgtcgg cccttcgcgc cgcggtcggg tccgcaggga ccctgatggg ttatgcctca 180
tgggaccgct cgccctatga ggagacgctg aacggcgcgc ggatggacga agaactgcgc 240
cgccggtggc cacccttcga tctggccaca tccggtacct atcccggctt cggcctgctc 300
aaccggtttc tgcttgaggc gcccgacgca cggcgacgag cgcataccga cgcctccatg 360
gtcgcggtcg gcccccttgc gccacgctg acagagccgc accggcttgg gcaggcgctg 420
ggcgaaggct cgccgctgga gcgcttcgct gggcatggcg gaaaggtoct gcttctggga 480
gcgcgcgctc actccgctac cgtgctgcat tacgccgagg ccatcgcccc catcccgaac 540
aaacgccgcg tgacctatga aatgccgatg ctgcggcccg atggcagggt ccgatgggag 600
ctggccgagg atttcgacag caacggcatt ctcgattgct tcgcggtcga tgggaagccg 660
gatgccgctc agacgatcgc caaggcttat gtcgaactgg gccggcatcg ggaaggcatc 720
gtcgggtcgc caccctccta tctgtttgaa gcgcaggata tcgtctcggt cggcgctcacc 780

tatctcgaac agcatttcgg cgcgccctga

810

<210> 1357

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1357

gcccattccat ttgcctttgc

20

<210> 1358

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1358

gcgtaccaac ttgccatcct gaag

24

<210> 1359

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1359

tggccctgcc acctcactc

19

<210> 1360

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1360

cgtaccaact tgccatcctg aaga

24

<210> 1361

<211> 786

<212> DNA

<213> Escherichia coli

<400> 1361

gtgcaatacg aatggcgaaa agccgagctc atcgggtcagc ttctcaacct tgggggttacc 60
cccggcggtg tgctgctggt ccacagctcc ttccgtagcg tccggccct cgaagatggg 120
ccacttggac tgatcgaggc cctgcgtgct gcgctgggtc cgggagggac gctcgtcatg 180
ccctcgtggt caggtctgga cgacgagccg ttcgatcctg ccacgtcgcc cgttacaccg 240
gaccttggag ttgtctctga cacattctgg cgctgccaa atgtaaagcg cagcgcccat 300


```
ccatttgcct ttgcggcagc ggggccacag gcagagcaga tcattctctga tccattgccc 360
ctgccacctc actcgccctgc aagcccgggc gcccggtgtcc atgaactcga tgggcaggta 420
cttctcctcg gcgtgggaca cgatgccaac acgacgctgc atcttgccga gttgatggca 480
aaggttccct atgggggtgcc gagacactgc accattcttc aggatggcaa gttggtacgc 540
gtcgattatc tcgagaatga ccaactgctgt gagcgctttg ccttggcgga cagggtggctc 600
aaggagaaga gccttcagaa ggaagggtcca gtcgggtcatg cctttgctcg gttgatccgc 660
tcccgcgaca ttgtggcgac agccctgggt caactgggcc gagatccgtt gatcttcctg 720
catccgccag agggcgggat gcgaagaatg cgatgccgct cgccagtcga ttggctgagc 780
tcatga
```

<210> 1362
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1362
cgccgccatc gcccaaagct gg 22

<210> 1363
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1363
cggcataatg gagcgcggtg actg 24

<210> 1364
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1364
tttctcggcc acgcaggaaa aatc 24

<210> 1365
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1365
catcctcgac gaatatgccg cg 22

<210> 1366
<211> 900
<212> DNA

<213> Enterobacter cloacae

```

<400> 1366
atgactgata cccgcaaaaa cggcgatttg cacgaaccgc cgacggcacc cgcgacgccc 60
tggtccaaaa gcgagctggg cccgcaattg cgcgacctcg gcgtgctgctc aggcgatatg 120
gtgatgccgc atgtgtcggt gcgcgccgctc gggccgctgg cggacggacc gcagacactt 180
gtcgatgcgc tgatcgaggg cgctcgcccc accgggaata ttctcgctt cgtctcgtgg 240
cgcgattcgc cctatgaaca gacgtgggt catgatgcgc cgcccgccgc catcgcccaa 300
agctggcctg cgttcgaccc cgaccatgcy cccgcctacc ccggctttgg cgcgatcaac 360
gaatttatcc gaacctatcc ggggtgtcgg cgcacggccc atcccgaagc atcgatggcg 420
gcgatcgggc cegatgcggc gtggctgggt gcgcgcgacg agatggggcg cgcttatggc 480
ccccgctcgc cgatcgcgcg ttttctcgcc cagcgaggaa aaatcctgtc gatcggcgcc 540
gggcccgatg cagtcaccgc gctccattat gccgaagcgg tggcgcggat cgagggcaag 600
cgccgcgtca cttattcgat gcccttactg cgcgaaggca agcgcgtctg gggtaccacg 660
tccgactggg attcgaacgg catcctcgac gaatatgccg cggccgacgg ccccgcgcg 720
gtcgaacgga tcgcccgcga ctatctcgcc cgcaccaggg ttgcgcaagg cccggtcggc 780
ggcgcgcaat cccggctgat cgacgcggcc gatatcgttt ccttcggcat cgaatggctc 840
gaggcgcgcc acgccgcgcy agcggcgcca gcgtgaagc cgaaacaacg ccgcgactga 900

```

<210> 1367

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1367

caaataact aacagaagcg ttca

24

<210> 1368

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1368

aggatcttgc caataccttt at

22

<210> 1369

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1369

aaacctttgt ttcggctctgc taat

24

<210> 1370

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:

Oligonucleotide

<400> 1370
aagcgattcc aataatacct tgct 24

<210> 1371
<211> 558
<212> DNA
<213> Citrobacter diversus

<400> 1371
atgaattatc aaattgtgaa tattgctgaa tgcagcaatt atcagttaga agcagcaaat 60
atactaacag aagcgttcaa tgatcttggt aacaattcat ggccagatat gacgagtgca 120
acaaaagaag taaaagaatg tattgagagt ccaaaccctt gtttcggtct gctaataaat 180
aactccttag ttggctggat aggcttaagg ccaatgtaca aggaaacctg ggaattgcat 240
ccattgggtg tcagaccaga ttatcaaaat aaagggtatt gcaagatcct gcttaaggaa 300
ttagaaaaca gagctagaga gcaagggtatt attggaatcg ctttaggaac agatgatgaa 360
tactatagaa caagtctctc tttaataact ataacagaag ataatatatt tgattcaata 420
aaaaatatatta aaaatattaa taaacatcca tatgagtttt atcagaagaa tgggtattat 480
attgttgga taattccaaa tgccaatggt aaaaacaaac cagatatattg gatgtggaaa 540
agtttaaatca aagagtaa 558

<210> 1372
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1372
gctttcggtg cctttgccga ggtc 24

<210> 1373
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1373
caccctgtt gcttcgccca ctc 23

<210> 1374
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1374
agatattggc ttcgccgcac caca 24

<210> 1375
<211> 23
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1375

ccctgttgct tcgcccactc ctg

23

<210> 1376

<211> 441

<212> DNA

<213> *Serratia marcescens*

<400> 1376

atgatcgtea	tctgcgacca	cgacaacctc	gacgcctggc	tggcgctgcg	caccgcgctg	60
tggccctccg	gctcgcctga	agatcacccg	gcgaaaatgc	gcgagatatt	ggcttcgccg	120
caccacaccg	cgtttatggc	gcgggggctg	gacggcgctt	tcgttgccct	tgccgaggtc	180
gcgctgcgct	acgattacgt	caacggctgc	gaatcgctcg	cggtaggcgt	tttggaagga	240
atttataccg	ccgaacgcgc	ccgccgccag	ggctggggcg	cgcgcctgat	cgcgaggtg	300
caggagtggg	cgaagcaaca	ggggtgcagc	gagctggcgt	cggataccga	tatcgccaat	360
ctggactccc	agcgcctgca	tcgggcgctg	ggctttgccg	aaacggagcg	agtagtggtt	420
taccgcaaaa	cgctgggctg	a				441

<210> 1377

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1377

gccgtgggtc gatgtttgat gtta

24

<210> 1378

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1378

gctcgatgac gccaaactacc tctg

24

<210> 1379

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1379

agcagcaacg atgttacgca gcag

24

<210> 1380

<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1380
cgctcgatga cgccaactac ctct 24

<210> 1381
<211> 972
<212> DNA
<213> Escherichia coli

<400> 1381
gtggtaacgg cgcagtgggcgt gttttcatgg cttcttggtta tgacatgttt ttttggggta 60
cagtctatgc ctcgggcatc caagcagcaa gcgcgttacg ccgtgggtcg atgtttgatg 120
ttatggagca gcaacgatgt tacgcagcag ggcagtcgcc ctaaaacaaa gttaaaccatc 180
atgaggggaag cgggtgatcgc cgaagtatcg actcaactat cagaggtagt tggcgtcac 240
gagcgccatc tcgaaccgac gttgctggcc gtacatttgt acggctccgc agtggatggc 300
ggcctgaagc cacacagtga tattgatttg ctggttacgg tgaccgtaag gcttgatgaa 360
acaacgcggc gagctttgat caacgacctt ttggaaactt cggttcccc tggagagagc 420
gagattctcc gcgctgtaga agtcaccatt gttgtgcacg acgacatcat tccgtggcgt 480
tatccagcta agcgcgaact gcaatttgga gaatggcagc gcaatgacat tcttgacagg 540
atcttcgagc cagccacgat cgacattgat ctggctatct tgctgacaaa agcaagagaa 600
catagcgttg ccttggtagg tccagcggcg gaggaactct ttgatccggg tccctgaacag 660
gatctatttg aggcgctaaa tgaaacctta acgctatgga actcgccgcc cgactgggct 720
ggcgaatgagc gaaatgtagt gcttacgttg tcccgcattt ggtacagcgc agtaaccggc 780
aaaatcgcg cgaaggatgt cgctgccgac tgggcaatgg agcgcccgcc ggcccagtat 840
cagcccgta tacttgaagc tagacaggct tatcttggac aagaagaaga tcgcttggcc 900
tcgcgcgcag atcagttgga agaatttgtc cactacgtga aaggcgagat caccaaggta 960
gtcggcaaat aa 972

<210> 1382
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1382
tagatatgat aggcggtaaa aagc 24

<210> 1383
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1383
cccaaattcg agtaagaggt att 23

<210> 1384
<211> 22
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1384

gatatgatag gcggtaaaaa gc

22

<210> 1385

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1385

tcccaaattc gagtaagagg ta

22

<210> 1386

<211> 477

<212> DNA

<213> Staphylococcus aureus

<400> 1386

atgaaagaaa	gatatggaac	agtatataaa	ggctctcaga	ggctcataga	cgaggaaaagt	60
ggagaagtaa	tagaggtaga	taagctatac	cgtaaacaaa	cgtctggtaa	ctttgtaaaa	120
gcgtatatcg	tccaattaat	aagtatgtta	gatatgatag	gcggtaaaaa	gctcaagatt	180
gttaattata	tattagataa	tgtacatcta	agtaataaca	caatgatagc	aactgttaga	240
gaaatagcag	aaggaacaaa	tacaagcacg	aaaaccgtaa	atacaacgct	taaaatctta	300
gaagaaggaa	atatcattaa	aagaagaact	ggagcattaa	tgctaaaccc	agagctactc	360
atgagaggcg	atgacaaaaa	acaaaaatac	ctcttactcg	aatttgggaa	ctttgagcaa	420
gaggacgacc	aaaagcaaga	aaatgcttta	tcagaatatt	attctttcaa	ggagtag	477

<210> 1387

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1387

ttatgcctct tccgaccatc aagc

24

<210> 1388

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1388

tacgctcgtc atcaaaatca ctcg

24

<210> 1389

<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1389
gaataacggt ttggttgatg cgag 24

<210> 1390
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1390
atggcaagat cctggtatcg gtct 24

<210> 1391
<211> 816
<212> DNA
<213> Escherichia coli

<400> 1391
atgagccata ttcaacggga aacgtcttgc tcgaggccgc gattaaattc caacatggat 60
gctgatttat atgggtataa atgggctcgc gataatgtcg ggcaatcagg tgcgacaatc 120
tatcgattgt atgggaagcc cgatgcgcca gagttgtttc tgaaacatgg caaaggtagc 180
gttgccaatg atgttacaga tgagatggtc agactaaact ggctgacgga atttatgcct 240
cttccgacca tcaagcattt tatccgtact cctgatgatg catggttact caccactgcg 300
atccccggga aaacagcatt ccaggtatta gaagaatata ctgattcagg tgaaaatatt 360
gttgatgcgc tggcagtggt cctgcgccgg ttgcattcga ttctgtttg taattgtcct 420
tttaacagcg atcgcgattt tctgtctcgt caggcgcaat cacgaatgaa taacggtttg 480
gttgatgcga gtgattttga tgacgagcgt aatggctggc ctggtgaaca agtctggaaa 540
gaaatgcata agctttttgcc attctcaccg gattcagtcg tcaactatgg tgattttctca 600
cttgataacc ttattttttga cgaggggaaa ttaataggtt gtattgatgt tggacgagtc 660
ggaatcgcag accgatacca ggatcttgcc atcctatgga actgcctcgg tgagttttct 720
ccttcattac agaaacggct ttttcaaaaa tatggtattg ataatcctga tatgaataaa 780
ttgcagtttc atttgatgct cgatgagttt ttctaa 816

<210> 1392
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1392
tgggtggaga ggctattcgg ctat 24

<210> 1393
<211> 23
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1393
cagtcacctc ccgcttcagt gac 23

<210> 1394
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1394
gacgttgtca ctgaagcggg aagg 24

<210> 1395
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1395
cttggtggtc gaatgggcag gtag 24

<210> 1396
<211> 795
<212> DNA
<213> Escherichia coli

<400> 1396
atgattgaac aagatggatt gcacgcaggt tctccggccg cttgggtgga gaggetattc 60
ggctatgact gggcacaaca gacaatcggc tgctctgatg ccgccgtgtt ccggctgtca 120
gcgcaggggc gcccggttct ttttgtcaag accgacctgt ccgggtgccct gaatgaactg 180
caggacgagg cagcgcggct atcgtggctg gccacgacgg gcgttccttg cgcagctgtg 240
ctcgacgttg tcaactgaagc ggggaagggac tggctgctat tgggcgaagt gccggggcag 300
gatctctgt catctcacct tgctcctgcc gagaaagtat ccatcatggc tgatgcaatg 360
cgccggctgc atacgcttga tccggctacc tgcccatcgc accaccaagc gaaacatcgc 420
atcgagcgag cagctactcg gatggaagcc ggtcttgctg atcaggatga tctggacgaa 480
gagcatcagg ggctcgcgcc agccgaactg ttcgccaggc tcaaggcgcg catgcccagc 540
ggcgaggatc tcgtcgtgac ccatggcgat gcctgcttgc cgaatatcat ggtggaaaat 600
ggccgctttt ctggattcat cgactgtggc cggtgggtg tggcggaccg ctatcaggac 660
atagcgttgg ctaccggtga tattgctgaa gagcttggcg gcgaatgggc tgaccgcttc 720
ctcgtgcttt acggtatcgc cgctcccgat tcgcagcgca tcgccttcta tcgccttctt 780
gacgagttct tctga 795

<210> 1397
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1397
gtgggagaaa atgaaaacct at 22

<210> 1398
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1398
atggagtgaag agagcctgat 20

<210> 1399
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1399
acctatgatg tgggaacggga aaag 24

<210> 1400
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1400
cgatggagtg aaagagcctg atg 23

<210> 1401
<211> 795
<212> DNA
<213> Enterococcus faecalis

<400> 1401
atggcctaaaa tgagaatata accggaattg aaaaaactga tcgaaaaata ccgctgcgta 60
aaagatacgg aaggaatgtc tcctgctaag gtatataagc tgggtgggaga aaatgaaaac 120
ctatatattaa aaatgacgga cagccggtat aaagggacca cctatgatgt ggaacgggaa 180
aaggacatga tgctatggct ggaaggaaaag ctgcctgttc caaaggctct gcactttgaa 240
cgcatgatg gctggagcaa tctgctcatg agtgaggccg atggcgctct ttgctcggaa 300
gagtatgaag atgaacaaaag ccctgaaaag attatcgagc tgtatgcgga gtgcatcagg 360
ctcttttact ccatcgacat atcggattgt ccctatacga atagcttaga cagccgctta 420
gccgaattgg attacttact gaataacgat ctggccgatg tggattgcga aaactgggaa 480
gaagacactc catttaaaga tccgcgcgag ctgtatgatt ttttaaagac ggaaaagccc 540
gaagaggaac ttgtcttttc ccacggcgac ctgggagaca gcaacatctt tgtgaaagat 600
ggcaaagtaa gtggctttat tgatcttggg agaagcggca gggcggacaa gtggtatgac 660
attgccttct gcgtccgggt gatcagggag gatatcgggg aagaacagta tgtcgagcta 720
ttttttgact tactggggat caagcctgat tgggagaaaa taaaatatta tattttactg 780
gatgaattgt tttag 795

<210> 1402
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1402
tattcaacaa tttatcggaa acag 24

<210> 1403
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1403
tcagagagcc aactcaacat ttt 23

<210> 1404
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1404
aaacagcgtt ttagagccaa ataa 24

<210> 1405
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1405
ttctcagaga gccaaactcaa catt 24

<210> 1406
<211> 780
<212> DNA
<213> Acinetobacter baumannii strain BM2580

<400> 1406
atggaattgc ccaatattat tcaacaattt atcggaaaca gcgtttttaga gccaaataaa 60
attggtcagt cgccatcgga tggtttattct tttaatcgaa ataatagaaac ttttttttctt 120
aagcgatcta gcactttata tacagagacc acatacagtg tctctcgtga agcgaaaaatg 180
ttgagttggc tctctgagaa attaaagggtg cctgaactca tcatgacttt tcaggatgag 240
cagtttgaat tcatgatcac taaagcgcac aatgcaaaac caatttcagc gctttttttta 300
acagaccaag aattgcttgc tatctataag gaggcactca atctgttaaa ttcaattgct 360
attattgatt gtccatttat ttcaaacatt gatcatcggt taaaagagtc aaaattttttt 420
attgataacc aactccttga cgatatagat caagatgatt ttgacactga attatgggga 480
gaccataaaa cttacctaag tctatggaat gagttaaccg agactcgtgt tgaagaaaga 540
ttgggtttttt ctcatggcga tatcacggat agtaatatat ttatagataa attcaatgaa 600
attttattttt tagatcttgg tcgtgctggg ttagcagatg aattttgtaga tatatccttt 660
gttgaacgtt gcctaagaga ggatgcatcg gaggaactcg cgaaaatatt ttttaaagcat 720
ttaaaaaatg atagacctga caaaaggaat tatttttttaa aacttgatga attgaattga 780

<210> 1407
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1407
ccctgtaata gaaaagcaag tagg 24

<210> 1408
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1408
ttgtcgtatc cctcaaata cc 22

<210> 1409
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1409
tgggattaca atggcaatca gcg 23

<210> 1410
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1410
ggggaatagg tcacaagatc tgctt 25

<210> 1411
<211> 912
<212> DNA
<213> Pseudomonas aeruginosa

<400> 1411
atgcttttat ataaaatgtg tgacaatcaa aattatgggg ttacttacat gaagttttta 60
ttggcatttt cgcttttaaat accatccgtg gtttttgcaa gtagttcaaa gtttcagcaa 120
gttgaacaag acgttaaggc aattgaagtt tctctttctg ctcgtatagg tgtttccggt 180
cttgatactc aaaatggaga atattgggat tacaatggca atcagcgctt cccgttaaca 240
agtactttta aaacaatagc ttgcgctaaa ttactatatg atgctgagca aggaaaaagt 300
aatcccaata gtacagtcga gattaagaaa gcagatcttg tgacctattc ccctgtaata 360
gaaaagcaag tagggcaggc aatcacactc gatgatgcgt gcttcgcaac tatgactaca 420

```

agtgataata ctgctggcaaa tatcatccta agtgctgtag gtggccccc aaaggcgttact 480
gatttttttaa gacaaattgg ggacaaagag actcgtctag accgtattga gcctgattta 540
aatgaaggta agctcgggtga tttgagggat acgacaactc ctaaggcaat agccagtact 600
ttgaataaac ttttatttgg ttccgcgcta tctgaaatga accagaaaaa attagagtct 660
tggatgggtga acaatcaagt cactggtaat ttactacgtt cagtattgcc ggcgggatgg 720
aacattgcgg atcgtcagg tgctggcgga tttggtgctc ggagtattac agcagttgtg 780
tggagtgagc atcaagcccc aattattgtg agcatctatc tagctcaaac acaggcttca 840
atggcagagc gaaatgatgc gattgttaaa attggtcatt caatttttga cgtttataca 900
tcacagtcgc gc 912

```

```

<210> 1412
<211> 21
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

```

```

<400> 1412
gagaaaaacgc tccagcaggg c 21

```

```

<210> 1413
<211> 21
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

```

```

<400> 1413
catgaggctt tcaactgcggg g 21

```

```

<210> 1414
<211> 21
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

```

```

<400> 1414
tatcgттаат cgcaccatca c 21

```

```

<210> 1415
<211> 21
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence:
      Oligonucleotide

```

```

<400> 1415
atgcagtaat gcggctttat c 21

```

```

<210> 1416
<211> 1146
<212> DNA

```

<213> *Klebsiella pneumoniae* strain HEL-1

<400> 1416

```
atgatgaaaa aatcggttatg ctgcgctctg ctgctgacag cctcttttctc cacatttgct 60
gccgcaaaaa cagaacaaca gattgccgat atcgttaatc gcaccatcac cccgttgatg 120
caggagcagg ctattccggg tatggccgtt gccgttatct accagggaaa accctattat 180
ttcacctggg gtaaagccga tatcgccaat aaccacccag tcacgcagca aacgctgttt 240
gagctaggat cggtttagtaa gacgtttaac ggcgtggttg gcggcgatgc tatcgcccgc 300
ggcgaaatta agctcagcga tccggtcacg aaatactggc cagaactgac aggcaaacag 360
tggcagggta tccgcctgct gcacttagcc acctatacgg caggcggcct accgctgcag 420
atccccgatg acgttaggga taaagccgca ttactgcatt tttatcaaaa ctggcagccg 480
caatggactc cgggcgctaa gcgactttac gctaactcca gcattggtct gtttggcgcg 540
ctggcgggtga aacctcagg aatgagttac gaagaggcaa tgaccagacg cgtcctgcaa 600
ccattaaaaac tggcgcatat ctggattacg gttccgcaga acgaacaaaa agattatgcc 660
tggggctatc gcgaagggaa gcccgtagac gtttctccgg gacaacttga cgccgaagcc 720
tatggcgtga aatccagcgt tattgatatg gcccgctggg ttcaggccaa catggatgcc 780
agccacgttc aggagaaaaac gctccagcag ggcattgcgc ttgcgcagtc tcgctactgg 840
cgtattggcg atatgtacca gggattaggg tgggagatgc tgaactggcc gctgaaagct 900
gattcgatca tcaacggcag cgacagcaaa gtggcattgg cagcgcttcc cgccgttgag 960
gtaaaccgcc ccgccccgcg agtgaaagcc tcatgggtgc ataaaacggg ctccactggg 1020
ggatttggca gctacgtagc cttcgttcca gaaaaaaacc ttggcatcgt gatgctggca 1080
aacaaaagct atcctaacc tgtccgtgtc gaggcggcct ggcgcattct tgaaaagctg 1140
caataa
```

<210> 1417

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1417

```
tggttaacta yaatccsatt gcgga 25
```

<210> 1418

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1418

```
atgctttacc cagcgtcaga tt 22
```

<210> 1419

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1419

```
cgatgaataa gctgatttct cacg 24
```

<210> 1420

<211> 24

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1420
tgctttaccc agcgtcagat tacg 24

<210> 1421
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1421
aattagagcg gcagtcggga ggaa 24

<210> 1422
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1422
gaaatcagct tattcatcgc cacg 24

<210> 1423
<211> 876
<212> DNA
<213> Escherichia coli strain GRI-1

<400> 1423
atgggttaaaa aatcactgcg tcagttcacg ctgatggcga cggcaaccgt cacgctgttg 60
ttaggaagtg tgccgctgta tgcgcaaacg gcggacgtac agcaaaaact tgccgaatta 120
gagcggcagc cgggaggaag actgggtgtg gcattgatta acacagcaga taattcgcaa 180
atactttatc gtgctgatga gcgctttgcg atgtgcagca ccagtaaagt gatggccgtg 240
gccgcggtgc tgaagaaaag tgaaagcgaa ccgaatctgt taaatcagcg agttgagatc 300
aaaaaatctg acttggttaa ctataatccg attgcggaaa agcacgtcga tgggacgatg 360
tcaactggctg agcttagcgc ggccgcgcta cagtacagcg ataactgtggc gatgaataag 420
ctgatttctc acgttggcgg cccggctagc gtcaccgcgt tcgcccagaca gctgggagac 480
gaaacggttc gtctcgaccg taccgagcgc acgttaaaca ccgccattcc gggcgatccg 540
cgtgatacca cttcacctcg ggcaatggcg caaactctgc gtaatctgac gctgggtaaa 600
gcattgggtg acagccaacg ggccgagctg gtgacatgga tgaaaggcaa taccaccggt 660
gcagcgagca ttcaggctgg actgcctgct tcctgggttg tgggggataa aaccggcagc 720
ggtgactatg gcaccaccaa cgatatcgcg gtgatctggc caaaagatcg tgcgccgctg 780
attctggtca cttacttcac ccagcctcaa cctaaggcag aaagccgctc cgatgtatta 840
gcgtcggcgg ctaaaatcgt caccaacggt ttgtaa 876

<210> 1424
<211> 23
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1424
gttaacggtg atggcgacgc tac 23

<210> 1425
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1425
gaattatcgg cgggtgtaat cagc 24

<210> 1426
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1426
cacgctcaat accgccattc ca 22

<210> 1427
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1427
ttatcgccca ctacccatga tttc 24

<210> 1428
<211> 876
<212> DNA
<213> Salmonella typhimurium strain CAS-5

<400> 1428
atgatgactc agagcattcg ccgctcaatg ttaacggtga tggcgacgct acccctgcta 60
ttagcagcg caacgctgca tgcgcaggcg aacagcgtgc aacagcagct ggaagccctg 120
gagaaaagtt cgggaggctg gcttggcggt gcgctgatta acaccgccga taattcgcag 180
attctctacc gtgccgatga acgtttttgc attgtgcagta ccagtaaggc gatggcgggc 240
gcggcggtgc ttaaacagag cgagagcgat aagcacctgc taaatcagcg cgttgaaatc 300
aagaagagcg acctgggttaa ctacaatccc attgctggaga aacacgttaa cggcacgatg 360
acgctggctg agcttggcgc agcggcgctg cagtatagcg acaatactgc catgaataag 420
ctgattgccc atctgggtgg tcccgataaa gtgacggcgt ttgctcgctc gttgggtgat 480
gagaccttcc gtctggacag aaccgagccc acgctcaata ccgccattcc aggcgacccg 540
cgtgatacca ccacgccgct cgcgatggcg cagaccctga aaaatctgac gctgggtaaa 600
gcgctggcgg aaactcagcg ggcacagttg gtgacgtggc ttaagggcaa tactaccggt 660
agcgcgagca ttcggggcggg tctgccgaaa tcatgggtag tgggcgataa aaccgggcagc 720
ggagattatg gcaccaccaa cgatatcgcg gttatctggc cggaaaacca cgcaccgctg 780
gttctggtga cctactttac ccaaccggag cagaaggcgg aaagccgctc ggatattctg 840

gctgcggcgg cgaaaatcgt aaccacgggt ttctga 876

<210> 1429
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1429
tttacggcta aagatactga aaagt 25

<210> 1430
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1430
gtttaataaa acaaccaccg aataat 26

<210> 1431
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1431
taattgacac tccatttacg gctaa 25

<210> 1432
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide

<400> 1432
accgaataat attttccttt caggca 26

<210> 1433
<211> 741
<212> DNA
<213> Pseudomonas aeruginosa

<400> 1433
atgagcaagt tatctgtatt ctttatatatt ttgttttgca gcattgctac cgcagcagag 60
tctttgccag atttaaaaat tgaaaagcgt gatgaaggcg tttatgttca tacttcgttt 120
gaagaagtta acgggtgggg cggtgttcct aaacatgggt tgggtggttct tgtaaatgct 180
gaggcttacc taattgacac tccatttacg gctaaagata ctgaaaagtt agtcacttgg 240
tttgtggagc gtggctataa aataaaaaggc agcatttcct ctcattttca tagcgacagc 300